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CITY OF HEMET

HOUSING ELEMENT

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EXECUTIVE SUMMARY

This document is an update of the 1981 Housing Element. It is intended to determine the appropriateness of established goals, their effectiveness and what progress the City has made toward the implementation of the Housing Element.

The appropriateness of the previous Element's goals can best be reviewed in light of the community's characteristics. The City has continued to be an elderly, white community. The median age in 1980 was 64.2 with over 48 percent of the citizens 65 years of age or older.

The City provides a wide variety of housing types, with conventional single family varying from \$55,000 to \$95,000, and mobile homes, excluding land costs, from \$12,000 to \$45,000. This compares quite favorably with detached and attached homes in Los Angeles County (\$133,723 and \$103,473) and Orange County (\$814,285 and \$93,709) respectively.

The City has an usually high number of mobile homes. Presently over 4,662 mobile homes exist in rental parks or subdivisions. Yet since 1978 there has been a decrease in residential acreage devoted to mobile homes and multiple family developments and an increase in acreage for single family use. The rental rate in the City, according to the 1980 Census, was \$200.00 per month. recent surveys indicate the median rate has probably increased due to the greater range of rental rates, especially at the upper end. The City also has over 600 spaces available for recreational vehicles, with the potential for an additional 2,000 spaces within recently approved subdivisions.

Review of the previous Housing Element also noted a number of dramatic changes. First, due to the substantial increase in housing prices during the 70's, median housing prices increased 213 percent from \$17,200 in 1970 to \$53,900 in 1980. Second, the number of renters paying more than 25 percent of their income on rent increased from 26 percent in 1977 to 60 percent in 1980. This increase may have been due to an 80.5 percent increase in the number of apartments constructed between 1977 and 1980 and the City's large retirement age population which no longer receives a salaried income.

Third, the City's vacancy rate has also decreased substantially from a high in 1980 to close to 12 percent to an estimated 3 percent or lower in 1984. The high rate seemed to be due in part to the rapid increase in the supply of apartments, which exceeded demand at that time. Demand has since increased to a point where the two are equal.

The previous Housing Element also projected a simple 8 percent yearly population increase until the year 2000. This increase was based upon a trend established between 1970 and 1977. Although the percentage increase has diminished to approximately 4.4 percent over the last 4 years, the yearly numerical increase had remained at about 1,000 people for the last 14 years. Therefore, the population projection has been revised to reflect these recent trends.

The general goals of the City's Housing Element are:

1. The attainment of decent housing within a satisfying living environment for households of all socio-economic, racial, age and ethnic groups in Hemet.
2. The provision of a variety of housing opportunities by type, tenure, and cost for households of all sizes throughout the City.
3. The development of a balanced residential environment with access to employment opportunities, community facilities, and adequate services.

To attain these broad goals and address the documented needs of the City, a number of specific programs have been undertaken by the City and are listed below. Additional programs are listed in Section IV - DETAILED PROGRAMS.

1. Surveyed rental housing available for families, children and handicapped individuals. A brochure has been printed and is available upon demand, with a locational map, phone number, number of units and type, and whether families with children are permitted, or units have handicapped accessories.
2. Provided private purpose financing through the issuance of multiple family housing bonds for several senior citizen developments. These bonds provide revenue for developers at a reduced interest rate, therefore permitting them to construct units at a reduced cost. In turn, this savings is passed along to the renter in the form of reduced rental rates. The City has also approved 11 additional projects which could, upon meeting specific requirements, also be funded.
3. Adopted three (3) new residential zoning districts to provide a greater variety in housing types. All three zones are oriented to senior citizens, which not only comprise a majority of the year-round residents, but also the so-called "snow bird" residents who flee the cold states in the winter. The zones are briefly described below:
 - A. SR-3 Zone: A senior (55 years of age or older) apartment zone, with reduced parking and unit size requirements. Recreational facilities are required.
 - B. SLR Zone: This Small Lot Residential Zone is for seniors only (55 years and older) and a maximum rather than minimum lot size requirement, with vehicular access required from an alley.
 - C. TTPD Zone: This Travel Trailer Planned Development Zone is intended to meet the needs of the frequent visitor by permitting ownership of a travel trailer lot, within a community setting and complete with recreational facilities. Although this zone is not age restricted by the City, it would probably be oriented toward the senior age group.

4. Adopted a Redevelopment Project Area, the primary purpose of which is to eliminate flooding in the southwest portion of the City. The proposed improvements will have the effect of reducing the flood plain and open up additional land for residential housing. A Master Flood Control and Drainage Plan has been adopted which will aid the Redevelopment Plan.
5. Executed an agreement with the Riverside County Housing Authority to undertake the following programs within the City:
 - A. Home Improvement Program.
 - B. 312 Loans from the Department of Housing and Urban Development.
 - C. Senior Home Repair.
 - D. Weatherization.

INTRODUCTION

Intent and Purpose

This is a proposed amendment to the City of Hemet's Housing Element which was prepared in 1981 and adopted 1982 by the City Council. This Element was prepared in conformance with Assembly Bill 2853, signed by the Governor on September 26, 1980. Section 65588 (a) of the State Government Code provides "Each local government shall review its housing element as frequently as appropriate to evaluate all of the following:

- (1) The appropriateness of the housing goals, objectives, and policies in contributing to the attainment of the state housing goal.
- (2) The effectiveness of the housing element in attainment of the community's housing goals and objectives.
- (3) The progress of the city, county or city and county, in implementation of the housing element."

Section 65588 (b) also states that "the housing element shall be revised as appropriate, but not less than every five years, to reflect the results of this periodic review, except that the first such revision shall be accomplished by July 1, 1984."

As such, the primary purpose of this amendment will be to update all statistical data where possible, generally relying on recently released 1980 Census Data. Based upon this new information and the actions taken by the City over the last two (2) years, the appropriateness, effectiveness and progress of the City's Housing Element has been evaluated.

Public Participation

In 1978, the City of Hemet and the County of Riverside jointly prepared a questionnaire which was distributed by public notice in The Enterprise, a newspaper of local circulation. The questionnaire dealt with a range of housing and growth-related issues. In addition, workshops and meetings were held during 1978-9 as a forum for the exchange of ideas regarding the future growth and residential development in the Valley.

In January, 1981, the City Council of Hemet established a steering committee to guide the development of the General Plan. In this role, the steering committee reviewed progress on the Housing Element to insure compatibility with community goals and objectives.

Public hearings were held during the fall of 1981 on the prior draft housing element, and included within this document. Since the intent of this update is to address the changing needs of the City due to new information, the major directions and established policies will remain the same. This update will be reviewed by the Planning Commission and City Council during their public meetings. Each hearing will be advertised in the newspaper and the public will be invited to speak during the public hearing process before each body. The Commission and Council have the ability to modify the document to include any public comments.

Contents of the Housing Element

Pertinent statistics are summarized in the section immediately following this preface. The purpose of the summary is to describe the population and housing characteristics and needs that underlie the core of the Housing Element -- the proposed housing policies and programs. The statistical sources for this summary, along with supporting analysis can be found in Part V - COMMUNITY PROFILE AND HOUSING CHARACTERISTICS and Part VI - HOUSING PROBLEMS AND NEEDS.

Part IV, DETAILED PROGRAMS, consists of a complete compilation of proposed programs and related program descriptions. The HOUSING GOALS AND POLICIES, Part III, along with the statistical summary referred to in Part II, describes the main findings leading to the proposed policies and programs.

Part VII, HOUSING CONSTRAINTS reviews all of the market and governmental constraints to the development of land in the City of Hemet with a review of regional relationships. Part VIII, EXISTING HOUSING PROGRAMS, describes the programs that the County of Riverside Housing Authority and Riverside Community Development Department operate within the City of Hemet and the numbers of participants in these programs. Part IX briefly reviews the interrelationships of the various elements of the General Plan.

DATA SUMMARY*

General Description

The City of Hemet is generally divided into two major sectors: the existing developed portion of the City and the Southwest Area. The existing developed portion of the City is nearly "built out". The Southwest Area, for which Planned Community Development plans have been incorporated into the General Plan, is primarily undeveloped.

Much of the residential development in Hemet and in the Valley caters to the retirement population. The City of Hemet, as well as the Valley, has a considerable number of its residential areas devoted to mobile homes. Of the City's total residential acreage in use in 1984, 31.5 percent is used for mobile homes, 61.5 percent for single family homes, and 6 percent for multiple family units. The percentage of residential acreage for mobile homes increased considerably from 13 percent in 1966 to 36 percent in 1978, but has since been declining.

Mobile homes are generally located in the western portion of the City with single-family concentrated to the southeast. A large concentration of lower density multiple family development (duplexes) is found in the northwest portion of the City and higher density residential development is generally scattered in older residential areas just north and south of Florida Avenue in the older downtown area, although two recently constructed projects are to the north and south of this area.

Population Characteristics

The most recent population figure from the State Department of Finance dated January 1, 1984, shows a population of 26,570 persons residing in the City. The State Department of Finance figures reflect an increase of 3,916 over the 1980 Census figure of 22,454.

The Riverside County Planning Department indicated the 1980 population for the total unincorporated area of RSA 48 was 35,948 persons. County population estimates for 1985 indicate the unincorporated portion of RSA 48 could grow by 1,544 persons each year between 1980 and 1985. Most of the developed area of the unincorporated County area is adjacent to the city and within its Sphere of Influence. The Hemet/San Jacinto Valley was estimated by the Southern California Association of Governments to contain about 62,000 residents in 1980. RSA 48 has approximately 9.5% of the total County population. By the year 2000 this portion will decrease to 8.8%. RSA 48 boundaries are shown on Figure 1.

Housing and Household Characteristics

The median age of Hemet's population has increased over the last decade, but has since leveled off in the last few years. The median age in Hemet is 64.5 years. In the Valley, the median age is lower than Hemet, but higher than the average city in California. The retired population of the City has also been increasing over the years. In Hemet, 48.3 percent of the citizens are 65 or older according to the 1980 Census. This is slightly below the 52 percent rate recorded in the 1977 Special Census.

The City has few minorities. In 1980, 91 percent of the population is Anglo, with 6.2 percent Mexican, representing the largest minority group. The unincorporated portion of RSA 48 has 13.5% non-white ethnic representation.

The number of households in 1980 in the City totalled 11,395 with an average household size of 1.97. Considering the elderly composition of Hemet, it would appear that most households would consist of married couples, with a significant number of widows and widowers.

Fifty-four percent of the housing stock in Hemet was built between 1970 and 1980 and is in good structural condition. Hemet has an extremely high percent of homeowner-occupied units (64%) with 3.14% for sale vacancy rate and 11.78 for rental vacancy rate. Contact with local rental management agencies found the vacancy rate has dropped close to 5 percent in 1984. The 1977 Special Census also reveals that over half of the Hemet residents have lived in their homes less than five years.

In 1978, the average price of a home in Hemet ranged from \$50,000 to \$55,000. This figure was for two- and three- bedroom homes of 1,200 square feet on 6,000 square foot lots (the most common size unit being constructed in the City). The median rent for units in 1977 was approximately \$130 per month.

These figures have significantly changed. In 1984 housing prices range between \$55,000 and \$95,000. The median monthly rent increased to \$208.00, with almost 15 percent of the people paying more than \$300.00 per month for rent, according to the 1980 Census. According to a survey completed in October, 1984, the average weighted rental rate for 912 units, ranging in size from studio to three (3) bedrooms in the Hemet area is \$371.00.

Hemet was statistically defined as a low income community based on the results from the 1977 Special Census. The low income status may partially be attributed to the retirement status of the population. The median income for Hemet in 1977 was \$7,342. This situation has continued for according to the 1980 Census, the median income in the City was \$10,896 compared to \$16,037 in the County. Although this is a low median income figure, there are indicators that the City is not a typical low-income community. Bank deposits in the area exceed those in the Riverside area by a large margin per capita, indicating that a significant proportion of the population may have low incomes but large assets that are not reported in Census figures.

Housing Need

Housing need will be discussed in both quantitative and qualitative terms in the following sections of the Housing Element. It will be identified for particular groups of people and locales within the City as well. A summary of the 1982 Housing Element quantitative housing needs in Hemet, both short and long term, is presented below.

To adequately serve Hemet's households:

- 50 housing units are in need of major rehabilitation or must be replaced.
- 54 percent of the households are paying greater than 25 percent of their annual incomes for housing.

To adequately serve the needs of new households projected yearly:

- Approximately 780 new units need to be built each year for the next fifteen (15) years from 1984 to 2000 to accommodate an eight percent simple annual growth rate.
- Approximately 3,363 new units need to be constructed in the 5 year period, 1983-1988 to meet the Regional Housing Allocation Model projections issued by SCAG.

HOUSING GOALS AND POLICIES

Overall Housing Goals

The general goals of the Housing Element are as follows:

1. The attainment of decent housing within a satisfying living environment for households of all socio-economic, racial, age and ethnic groups in Hemet.
2. The provision of a variety of housing opportunities by type, tenure, and cost for households of all sizes throughout the City.
3. The development of a balanced residential environment with access to employment opportunities, community facilities, and adequate services.

In order to attain these goals, Hemet will utilize all relevant housing programs that are presently available without encumbering local public funds or creating any major administrative costs to the City. The City will also utilize existing development standards that generate units through normal market forces as the primary means of satisfying projected local housing need. The attainment of these goals is noted as part of the Housing Program Descriptions, starting in Page IV-6.

The policies and programs are organized around the following five issue areas, which are identified by the California Department of Housing and Community Development as important priorities for addressing local housing problems:

1. Programs for helping to assure equitable access to housing;
2. Programs for assuring adequate provision of housing;
3. Programs for utilizing opportunities to create new housing sites;
4. Programs for preserving and rehabilitating exiting housing stock; and
5. Programs for helping to encourage the maintenance of affordable purchase and rental costs.

Policies to Improve Housing Accessibility

In order to assure accessibility to decent housing for all, the City of Hemet shall:

- a. Promote fair housing practices through the City;
- b. Promote a variety of housing types, especially those which meet the special needs of handicapped and elderly households;
- c. Encourage the provision of adequate numbers of housing units to meet the needs of families of all sizes;

- d. Encourage the provision of sufficient rental units for families with children;
- e. Utilize the existing Federal, State and County housing assistance programs that are designed to improve the accessibility of housing for all socio-economic and special needs groups.

Policies to Provide Additional Affordable Units

To ensure adequate provision of housing for all economic segments of the community, the City of Hemet shall:

- a. Undertake economically feasible programs to provide for housing throughout the community to meet the needs of low and moderate income households.
- b. Continue to utilize the County Housing Authority's Federal, State and County housing assistance programs.
- c. Encourage the participation and financial commitment of private entities in attaining housing goals.
- d. Encourage the provision and continued availability of a range of housing types throughout the community with variety in the number of rooms and level of amenities.
- e. Promote the availability of sufficient rental housing stock to afford maximum choice of housing types for all economic segments of the community.
- f. Encourage the retention of existing numbers of mobile homes and investigate areas for potential new mobile homes in single family residential areas.

Policies for Adequate Housing Sites

To assure the adequate provision of sites for housing, the City of Hemet shall:

- a. Locate residential uses in close proximity to commercial and industrial areas and transportation routes to provide convenient access to employment centers.
- b. Plan for residential land uses which accommodate anticipated growth of new employment opportunities.
- c. Utilize existing Federal and State criteria for identifying and evaluating potential sites for assisted housing.

Policies for Neighborhood/Housing Preservation

in order to preserve housing and neighborhoods, the City of Hemet shall:

- a. Encourage the maintenance and repair of existing owner occupied and rental housing to prevent deterioration in the City.
- b. Encourage the rehabilitation of substandard and deteriorated housing, where feasible.
- c. Where possible, take action to promote the removal and replacement of those substandard units which cannot be rehabilitated.
- d. Provide and maintain an adequate level of community facilities and municipal services in all community areas.
- e. Improve and upgrade community facilities and services where necessary and feasible.

Policies to Preserve Affordability

In order to preserve affordability, the City shall promote the continued affordability of all units produced by taking the following actions:

- a. Encourage the continued affordability of those units utilizing public funds for rehabilitation;
- b. Encourage energy efficient housing;
- c. Continue to plan and facilitate the implementation of low and moderate income housing through all relevant Federal, State and County housing assistance programs, as well as local development standards.

Quantification of Housing Programs

The preceeding housing goals and policies provide the necessary policy directives to achieve a housing program that meets the State requirments. However, the State additionally requires that the housing program be sufficiently quantified in order to substantiate that the City's program will construct, rehabilitate, and conserve a maximum number of units. The programs that will be utilized to attain these general goals and specific policies are discussed in the following section, entitled Detailed Housing Programs Description. The specific numerical goals, which will need to be revised every few years as conditions change and as the availabiity of Federal, State, and County assisted housing programs change, are summarized in the following section.

DETAILED HOUSING PROGRAMS

State Requirements on Housing Provision

It will be necessary for the City to work closely with the Riverside County Housing Authority and Community Development Department to implement many of the following housing programs. The Housing Authority is funded on a "first come, first served" basis. The City continually reviews the appropriateness of all available Federal, State and County funding sources, both existing programs and any future applicable programs. The City will also attempt to utilize discretionary money available through the Community Development Block Grant program to implement the following programs. It should also be stressed that some of the following programs can enable the City to meet most of its housing needs through the normal housing market. The City has developed ordinances such as the PCD zone, which allows developers to provide affordable housing through utilization of varied design concepts, such as "zero lot line concept". The City is committed to implementing these ordinances to achieve a portion of its affordable housing needs.

As noted in Part VI, the City's share of future housing needs over the period 1983-1988 has been defined by SCAG in its Regional Housing Allocation Model (RHAM). The RHAM determined the number of units between 1983 and 1988, but the Housing Element must be updated in 1989, therefore, an additional 20% was added to each category. This model was developed in response to State mandates and establishes the maximum number of units that should be built during this period to accommodate the City's fair share. It further distributes this dwelling unit growth by the four income categories noted below. This distribution serves as a basis to meet the needs of all income groups over the next 5 years.

<u>Housing Income Category</u> <u>(Based on County Median)</u>	<u>Units needed</u> <u>by 1989</u>
Very low (less than 50%)	827
Low (between 50% - 80%)	1,051
Moderate (between 80% - 120%)	656
High (greater than 120%)	<u>830</u>
TOTAL	3,364

Quantification of Housing Programs

County Housing Authority. The various programs administered by the Riverside County Housing Authority (acting as the City's authority) can produce a significant number of new and rehabilitated units in Hemet and the surrounding market area over the next 5 years. The success of the programs described in the following pages, particularly program numbers 5, 11, 23 and 24 (pages IV-3 through IV-9) depend to a large degree on the funding levels the Riverside County Housing Authority (RCHA) receives in future years.

The RCHA's development division is pursuing new construction of units for low and moderate income households in and around the Hemet area. They are focusing on small scattered site locations for construction of between 20 and 30 units per project. RCHA staff anticipate 1 project annually within the Hemet market area which would result in from 100 to 150 new units in the next five years. Again funding expectations at the State and Federal levels are crucial in accomplishing this goal. City cooperation and programs related to vacant land analysis, density bonus provisions, speedy application processing, consultation and outreach with developers, and local Article 34 authorization should serve to assist the RCHA in achieving this goal (programs 7, 8, 13, 17, 25 and 26 in particular, pages IV-7 through IV-12).

Local Programs. Quantification of the programs that rely on City implementation to achieve the regional goals over the next five year rest not only upon the City, but likewise upon the private sector. Over 2,500 dwelling units of a variety of types have received tentative tract map approval and remain to be constructed in the City. If average annual dwelling unit construction over the past 5 years continues at that rate and comparable sales and rental values are maintained, achievement of the majority of the housing goals could occur. Financing for construction and purchase is one of the primary obstacles to attaining home ownership for low and some moderate income households. Co-investment and shared equity programs offer a potential means to bridge this gap. Program 12 would investigate the feasibility of local involvement. (Page IV-6)

Through developer consultation, outreach, continued encouragement of the use of flexible PCD zoning, and reduction of minimum lot sizes in infill areas (programs 7, 8, 11 and 18, pages IV-4 through IV-7), the City can help the private sector in utilizing density bonus provisions of State Law.

In addition reduction of minimum site standards (program 7, page IV-4) lend themselves particularly well to elderly and handicapped housing needs which as noted in Part VI, make up the majority of households needing assistance in the City. Combined with a density bonus, senior rental housing in in-fill areas could be provided by the private sector at or below market rate housing.

The City will require each new residential type development to install a sign (Program 26, Page IV-9) to help those searching for housing to more readily identify the various developments in town and their intended purpose.

Assistance to handicapped households (programs 2 and 3, Page IV-3) through the development of an ordinance to meet exiting and future handicapped households needs is important. With 24.3 % of the regions households in the unincorporated portions of RSA 48 currently handicapped an ordinance designed to assist this percentage would meet a demonstrated need.

Finally the City has established three redevelopment projects in the City. The Redevelopment Agency is required to utilize 20% of tax-increment funds which accrue to the Agency for housing assistance throughout the City. While not specified as a program at this time, it may provide a valuable mechanism to meet future housing needs.

The balance of the programs involve studies, analysis, data gathering, sensitive code enforcement and implementation of energy conservation measures which cannot be quantified in terms of housing production. However these programs, together with those discussed above and presented in the Detailed Housing Program Descriptions on the following pages, will contribute in an overall sense to the achievement of the goals and policies of this Element.

<u>STATUS</u>	<u>HOUSING PROGRAM DESCRIPTIONS</u>
Completed July, 1983	<p>(1) <u>Program Description:</u> Conduct a City-wide survey of rental housing and new housing available to families with children. Create a brochure for distribution to interested persons throughout the City and local social agencies.</p> <p><u>Responsible Agency:</u> Hemet Community Development Department</p> <p><u>Funding Source:</u> Department budget through application for any available grant sources</p> <p><u>Schedule:</u> 1982 and ongoing yearly update</p>
Completed July, 1983	<p>(2) <u>Program Description:</u> Conduct a City-wide survey of residential housing suitable for handicapped occupants. Create a brochure for distribution to interested persons through the City and local social service agencies.</p> <p><u>Responsible Agency:</u> Hemet Community Development Department</p> <p><u>Funding Source:</u> Department budget through application for any available grant sources</p> <p><u>Schedule:</u> 1982 and ongoing yearly update</p>
Partial implementa- tion through establish- ment of SR-3 Zone	<p>(3) <u>Program Description:</u> The City shall endeavor to meet identified handicapped housing needs through the development of an ordinance to require a percentage of handicap units to be provided in all new development projects or an in-lieu fee.</p> <p><u>Funding Source:</u> General Fund through the in-lieu fee paid by developers</p> <p><u>Schedule:</u> Spring, 1982</p>
Not yet undertaken	<p>(4) <u>Program Description:</u> Work with State and Federal legislative representatives and urge that regulations controlling financing and construction of housing for persons in need of housing assistance and subsidy programs be eased.</p> <p><u>Responsible Agency:</u> City of Hemet</p> <p><u>Funding Source:</u> Department Budgets</p> <p><u>Schedule:</u> Ongoing</p>

STATUSHOUSING PROGRAM DESCRIPTIONS

Contract
executed
with County
in March,
1983.

- (5) Program Description: Contract for and utilize all applicable housing programs available to the City through the County of Riverside Housing Authority to satisfy a portion of the City's identified housing needs. These general programs include, but are not limited to the following list and are more fully described in the appendix:

- a. Home Improvement Program.
- b. 312 Loans from the Department of Housing and Urban Development
- c. Senior Home Repair Program.
- d. Weatherization

Responsible Agencies: Referrals - Hemet Community Development Department

Program Administration - County of Riverside Housing Authority

Funding Sources: Federal, State and County funding

Schedule: Spring, 1982 and ongoing

Ongoing

- (6) Program Description: Provide consultation to aid private developers in expanding housing opportunities by encouraging pre-application conferences to inform them of housing needs and available City ordinances, etc. to produce affordable housing.

Responsible Agency: City of Hemet

Funding Source: Existing department budget

Schedule: Ongoing

Adopted SLR
Zone to
partially
fulfill re-
quirements.

- (7) Program Description: Consider a reduction in the minimum lot sizes for R-1 and R-2 zones. Reassess location of R-2 zones in infill areas. Encourage and facilitate compact development in infill areas when it does not over extend existing infrastructure.

Responsible Agency: Hemet Community Development Department

Funding Source: Department budget

Schedule: Spring, 1982

<u>STATUS</u>	<u>HOUSING PROGRAM DESCRIPTIONS</u>
Ongoing	<p>(8) <u>Program Description:</u> Encourage, on a continuing basis, use of factory-built housing as approved by the California Association of Building Officials by providing information regarding cost/benefit and feasibility of factory-built housing.</p> <p><u>Responsible Agency:</u> Hemet Community Development Department</p> <p><u>Funding Source:</u> Department budget</p> <p><u>Schedule:</u> Ongoing</p>
Mobilehome vacancy rate is checked yearly by City Building Dept. The rental survey was undertaken as part of Program 2.	<p>(9) Conduct a City-wide rental housing and mobilehome park space vacancy rate survey for use in consideration of housing planning activities. Combine these efforts with the annual State Department of Finance survey.</p> <p><u>Responsible Agency:</u> Hemet Community Development Dept.</p> <p><u>Funding Source:</u> Department budget</p> <p><u>Schedule:</u> 1982</p>
Not yet undertaken	<p>(10) <u>Program Description:</u> Initiate an outreach campaign to solicit participation of private developers in affordable housing programs; maintain a roster of interested firms.</p> <p><u>Responsible Agency:</u> Hemet Community Development Dept.</p> <p><u>Funding Source:</u> Department budget, private developers, and private lending institutions</p> <p><u>Schedule:</u> Upon adoption of the Housing Element</p>
Not yet undertaken	<p>(11) <u>Program Description:</u> Encourage the County to provide a satellite office of Riverside County Housing Authority within the Hemet area.</p> <p><u>Responsible Agency:</u> City of Hemet, County of Riverside</p> <p><u>Funding Source:</u> County of Riverside Housing Authority</p> <p><u>Schedule:</u> January, 1986</p>

STATUSHOUSING PROGRAM DESCRIPTIONS

Partially
achieved
through City
residential
Mortgage
Bond Issues.

- (12) Program Description: Develop homeownership co-investment programs using funds provided by the State of California or private financial institutions in conjunction with the County of Riverside Housing Authority and/or private financial institutions and other entities acting as co-investors to help low and moderate income families and individuals bridge the gap between their financial resources and the funds necessary to purchase a home.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget for feasibility study; private and public funding sources for co-investment to be identified.

Schedule: Ongoing, started in 1982

Implemented
through Title
24 of the State
of California
started in
July, 1984

- (13) Program Description: Establish procedures and regulations for encouraging the incorporation of energy efficiency into any new or rehabilitated residential unit by utilizing the Uniform Building Code regulations.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget through available grants

Schedule: Ongoing, started in 1984

Ongoing

- (14) Program Description: Continue to enforce development standards through the implementation of the PCD zone, etc. to provide for a variety of housing types and costs throughout the City and sphere of influence area.

Responsible Agency: City of Hemet; County of Riverside

Funding Source: Department budget

Schedule: On going

Ongoing -
City has
adopted a
Flood Control
and Drainage
Element and
the Redevelop-
ment Agency
has authorized
specific studies
and expenditure
of funds.

- (15) Program Description: Continue efforts to solve Salt Creek Flood problems by implementation of interim or permanent channel.

Responsible Agency: City of Hemet; County of Riverside

Funding Source: County and local funds

Schedule: Ongoing

STATUSHOUSING PROGRAM DESCRIPTIONS

Partially completed as part of City site selection for Housing Assistance Plan.

- (16) Program Description: Develop site selection criteria to use to identify publicly owned sites which could be utilized for low and moderate income housing developments. Utilize the existing Federal standards as a guideline. (See Appendix E)

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget

Schedule: Ongoing

Ongoing

- (17) Program Description: Continue the encouragement of Planned Community Developments as aids in housing rehabilitation and new construction to add flexibility to land utilization and building recycling and to increase the potential for a variety of housing types/cost.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget

Schedule: Ongoing

Partially implemented through the scheduling of equipment maintenance utilizing gas tax and similar revenues

- (18) Program Description: Encourage the development of a capital improvement program to provide for the orderly development of facilities and services in all areas of the community.

Responsible Agency: City of Hemet

Funding Source: Department budget

Schedule: Ongoing

Ongoing

- (19) Program Description: Upon request, continue to conduct occupancy inspections whereby each time a residential unit or apartment complex is sold, it is inspected for compliance with code requirements that emphasize safe and sanitary housing conditions. Adopt a code-enforcement policy for housing rehabilitation that will emphasize safe and sanitary housing and correction of health and safety violations and not necessarily force rigorous adherence to code compliance.

Responsible Agency: City of Hemet

Funding Source: City of Hemet; Possible CDBG funds

Schedule: Ongoing

<u>STATUS</u>	<u>HOUSING PROGRAM DESCRIPTION</u>
Ongoing	<p>(20) <u>Program Description:</u> Voluntary (i.e., "sensitive") code compliance, coordinated, where applicable, with the rehabilitation programs, to help prevent deterioration in marginal neighborhoods.</p> <p><u>Responsible Agency:</u> Hemet Community Development Dept.</p> <p><u>Funding Source:</u> Department Budget</p> <p><u>Schedule:</u> Ongoing</p>
Ongoing	<p>(21) <u>Program Description:</u> Implement State Energy Regulations. Continue review of all residential, commercial and industrial buildings for compliance with Title 24, State of California Energy Standards.</p> <p><u>Responsible Agency:</u> City of Hemet</p> <p><u>Funding Source:</u> Building Department Budget</p> <p><u>Schedule:</u> Ongoing</p>
Implemented through contract with Riverside County Housing Authority. Gas, Electric utilities also offer ongoing programs	<p>(22) <u>Program Description:</u> Seek all available funds and assistance to expand energy options to City of Hemet residents.</p> <p>There are presently Federal, State and private foundation and utility funds designed to develop energy programs, retrofit existing buildings with energy conservation devices, and for planning new building for energy efficiency. The City should utilize these funds whenever possible.</p> <p><u>Responsible Agency:</u> City of Hemet</p> <p><u>Funding Source:</u> Federal, State and utility funds</p> <p><u>Schedule:</u> Ongoing</p>
Ongoing	<p>(23) <u>Program Description:</u> Plan for low and moderate income housing in the City's sphere of influence in conjunction with the County Planning staff. By working through Riverside County Housing Authority to implement plans for low and moderate income housing, maximum benefits can be obtained.</p> <p><u>Responsible Agency:</u> Hemet Community Development Dept., Riverside County Planning Dept., Riverside County Housing Authority</p> <p><u>Funding Source:</u> Department budget for City and existing funding for other agencies</p> <p><u>Schedule:</u> Ongoing</p>

<u>STATUS</u>	<u>HOUSING PROGRAM DESCRIPTION</u>
68 Section 8 units constructed in 1983	<p>(24) <u>Program Description:</u> Continue to work toward the provision and allocation of additional development of low and moderate income rental housing as authorized by the passage of the Article 34 referendum within the City. Housing developed under this authority would benefit both elderly and handicapped as well as family households.</p> <p><u>Responsible Agency:</u> Riverside County Housing Authority</p> <p><u>Funding Source:</u> Federal and State programs for rental housing</p> <p><u>Schedule:</u> Ongoing effort of County Housing authority</p>
Several senior citi- zen projects, totalling 497 units have been construc- ted utilizing this procedure	<p>(25) <u>Program Description:</u> Provide private purpose financing through the issuance of mortgage revenue bonds, industrial development bonds, multiple family housing bonds, or non-profit bonds. These bonds provide revenue for a developer at a reduced interest rate for the construction of housing and industry.</p> <p><u>Responsible Agency:</u> City of Hemet</p> <p><u>Funding Source:</u> Developers</p> <p><u>Schedule:</u> Ongoing</p>
Adoption of implementing ordinance to occur in 1986	<p>(26) <u>Program Description:</u> Prepare and adopt an ordinance requiring all residential projects to have a sign identifying the development characteristics of each project, i.e., single family homes for senior citizens.</p> <p><u>Responsible Agency:</u> City of Hemet</p> <p><u>Funding Source:</u> Department Budget</p> <p><u>Schedule:</u> 1986</p>

OTHER IMPLEMENTATION ACTIONS

Although not specifically designated as part of the Housing Element, the City has undertaken a number of actions which further the policies contained in this document. With regard to improving housing accessibility, the City has adopted three (3) new zones which are primarily tailored to the City's large senior citizen population: The SR-3 (Senior Citizen Apartments); SLR (Small Lot Residential) and T.T.P.D. (Travel Trailer Planned Development) Zones. The SR-3 zone has parking and unit size requirements less than that found in the City's regular apartment zone (R-3). The reduction of these requirements permits higher densities to be achieved than under conventional R-3 zoning. The SR-3 Zone further specifies a density bonus will be granted in compliance with State law when the appropriate number of low and moderate income units are provided. The SLR Zone permits single family units on lots less than 5,000 square feet. No minimum lot size is specified.

The third zone, the T.T.P.D. (Travel Trailer Planned Development) Zone, is not age restricted by the City, but suits the lifestyle of seniors and so-called snow birds who come to the City in the winter. The T.T.P.D. Zone permits travel trailers or individually-owned lots within a park-type development. The small lots and reduced maintenance costs further promote affordability.

The need for this variety of housing is evident in the number of units approved:

SLR	115 lots
SR-3	541 units
T.T.P.D.	2,047 lots

The City has further aided in lowering housing costs through the issuance of mortgage revenue bonds. Through the Revenue and Taxation Code, the City is permitted to issue bonds on behalf of a developer, without any liability upon the City. The bonds are tax exempt because they are issued by a municipality and therefore cost less in the long run. This lowers the money cost to a developer, who can in turn, pass it along to the future tenant/owner. Seven (11) bond issues have been approved by the City and three of them have been issued. An example of this is a 16.5 million dollar bond issue was issued for one senior citizen project of 320 units.

COMMUNITY PROFILE AND HOUSING CHARACTERISTICS

A primary task of the Housing Element is the evaluation of housing problems and needs in Hemet. Housing needs exist to the extent that the existing housing supply falls short of providing all economic segments of the community with decent housing. The assessment of housing need is based upon the analysis of the relationship between the existing housing stock and the economic and demographic characteristics of the community.

The purpose of the following section is to present an overview and analysis of the existing housing supply in Hemet, including an inventory of the number of types of dwelling units, age and condition of units, tenure, vacancy rates, housing costs, and household and population characteristics.

Much of the data used in the Housing Element is taken from an analysis of the 1980 Federal Census. This data is supplemented by other information primarily to provide a comparison between past and present data. Planning and statistical areas, including RSA 48, and Census Tracts, are illustrated in the following figures. These geographic areas are mentioned frequently throughout the entire Housing Element.

HOUSING CHARACTERISTICS

Housing Types

In January, 1982, the City Council enacted, pursuant to State Law, an ordinance, defining single family standards thereto. The City's definition and development standards permit a variety of single family dwellings, including mobilehome, manufacturing housing and modular housing, on all properties zoned for single family dwellings. Therefore, any discussion of single family units would automatically include all of the above housing types, unless stated. Only a few modular or manufactured units have been constructed to date within the City.

In 1977 the City's single family housing stock was almost equally divided between mobile homes and standard single family units, with 38.2% and 45.5% respectively. Multiple family units accounted for the remaining 14.7%.

In 1984, the percentage distribution of housing types available had seen a rise in multiple family units with a concomitant decrease in the share mobile homes had retained over the years. See Table below.

TABLE 1
HOUSING TYPES
1984*

TYPE	AMOUNT/PERCENT	1977
		AMOUNT/PERCENT
Single Family	6,251 / 45.6	4,569 / 45.5
Multiple Family	2,792 / 20.4	1,477 / 14.7
Mobile Homes	4,662 / 34.0	3,835 / 38.2
Misc.		161 / 1.6
TOTAL	13,705 / 100%	10,042 / 100%

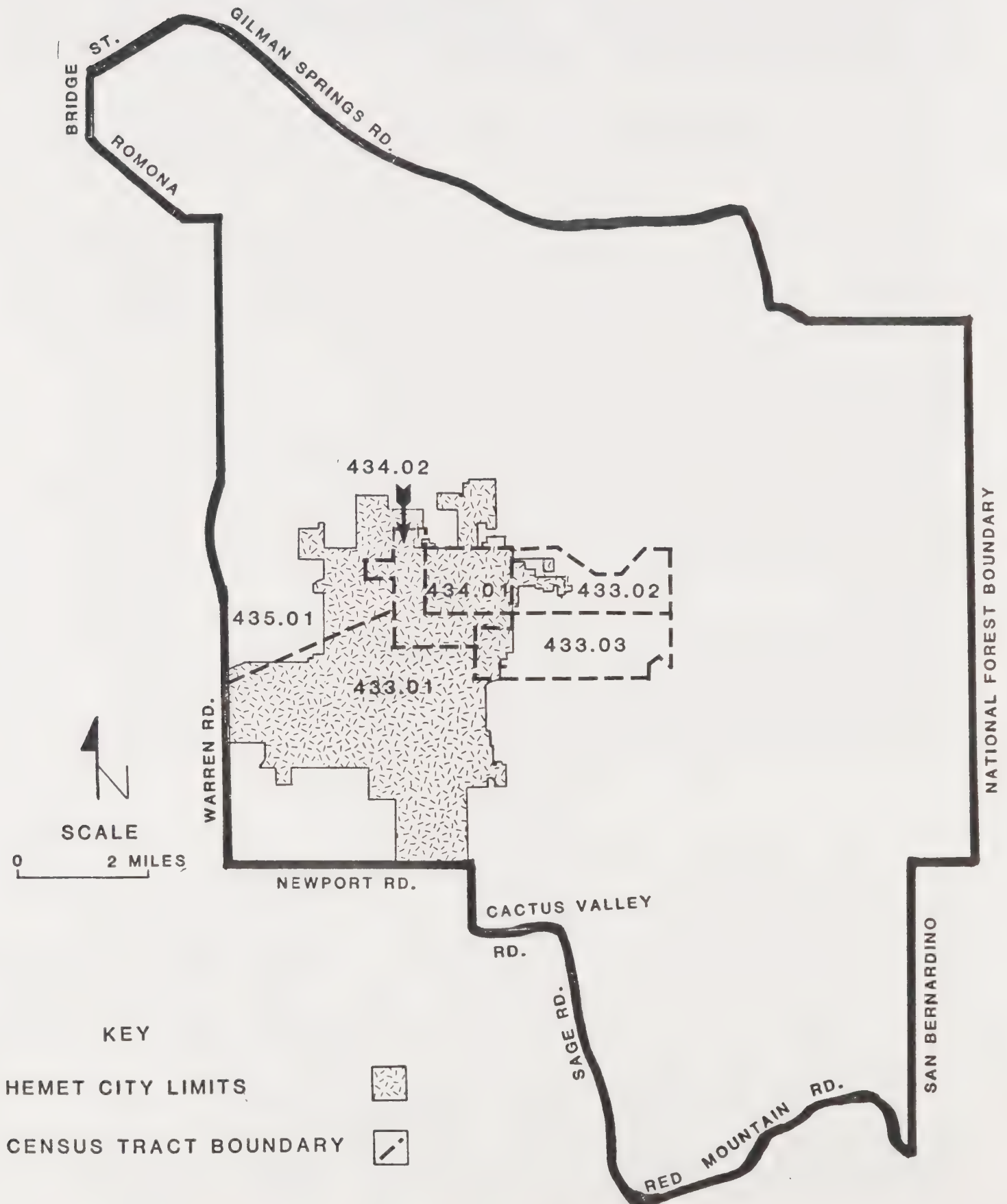
* SOURCE: 1977 Special Census. 1984 data determined by utilizing 1977 Special Census and Building Department building permits.

All of the major mobile home parks and recreational vehicle parks in Hemet are located west of State Street as shown on Figure 2. Figure 3 identifies the geographical distribution of single and multiple family units.

REGIONAL STATISTICAL AREA 48

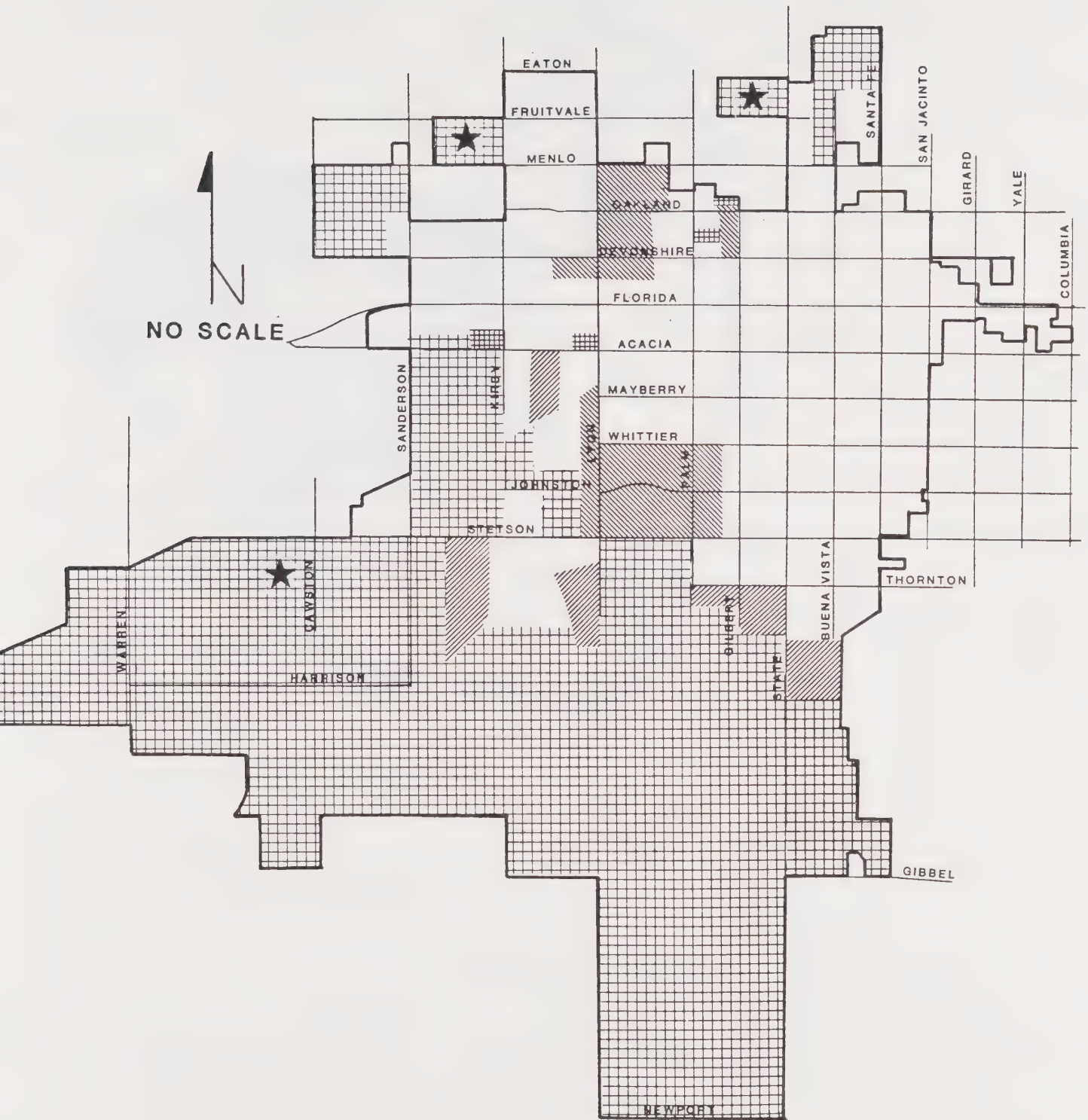
AND PORTIONS OF CENSUS TRACTS THAT COVER THE CITY

FIGURE 1



MOBILE HOMES

FIGURE 2



UNDEVELOPED LAND

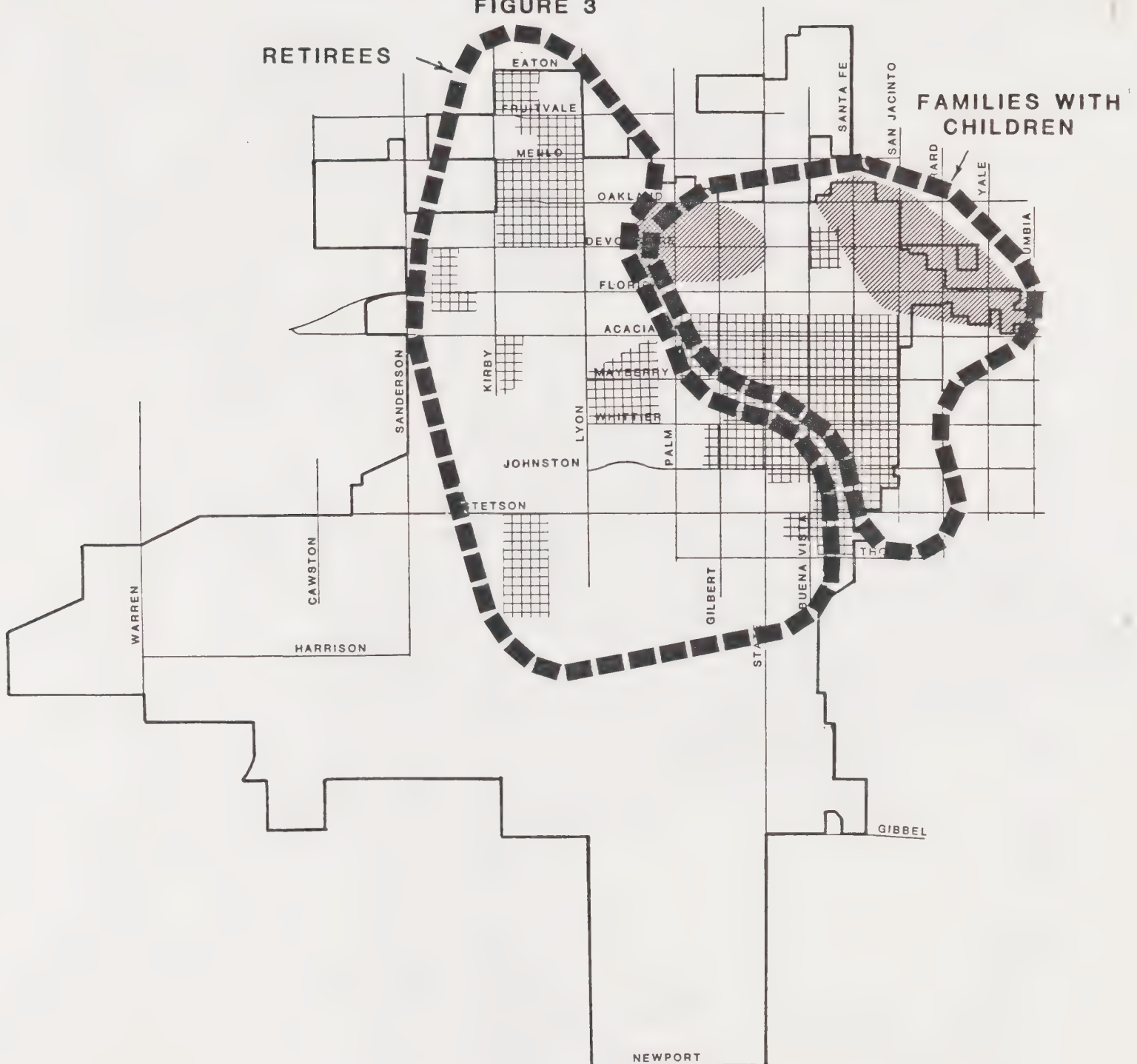
RECREATIONAL VEHICLE PARKS
(EXISTING)

MOBILE HOMES

PLANNED RECREATIONAL
VEHICLE PARKSSOURCE : HEMET PLANNING
DEPARTMENT

V-4 HOUSEHOLD AND UNIT TYPE DISTRIBUTION

FIGURE 3



KEY

SINGLE FAMILY UNITS

MAJORITY OF MULTIPLE
FAMILY UNITS



SOURCE : HEMET PLANNING DEPARTMENT
1980 CENSUS

Table 3 provides a further breakdown of the number of mobile home parks, recreational vehicle parks, total number of spaces devoted to these uses, and other related information for the entire City.

TABLE 2
MOBILE HOME PROFILE
1980 - CITY OF HEMET

Number of mobile home parks	22
Number of recreational vehicle parks	3
Number of recreational vehicle spaces	622
Number of mobile home subdivisions	4
Number of mobile home spaces (not in subdivision)	2,811
Number of mobile home spaces (in subdivision)	2,780
Number of mobile homes	4,662 *
Number of mobile home occupants	7,800
Occupants/household	1.67 (est)

SOURCE: 1980 Building Department Census

* Mobile homes represent 34% of the City's housing stock

Riverside County unincorporated area had a total of 120,731 dwelling units in 1980, with the following percentage breakdown by unit type:

UNIT TYPES	RIVERSIDE COUNTY UNINCORPORATED AREA	UNINCORPORATED PORTION OF RSA 48
Single Family Homes	79,267 / 66%	8,366 / 57%
Multiple Family	13,115 / 11%	1,553 / 11%
Mobile Homes	28,349 / 23%	4,684 / 32%

Age and Condition of Structures

Eighty-six percent (86%) of the housing stock in Hemet was built after 1960 and is in good structural condition. Table 4, below, indicates the age of the City's housing stock as based on the 1980 Census. The table below indicates a significant annual increase in new construction from 1960 to 1980.

TABLE 3
YEAR STRUCTURES BUILT
(1980 Census)

YEAR STRUCTURE BUILT	NUMBER OF UNITS	AVERAGE NUMBER OF UNITS PER YEAR
1939 and earlier	468 (4%)	--
1940 - 1949	393 (3%)	39.3
1950 - 1959	932 (7%)	93.2
1960 - 1969	4,025 (32%)	402.5
1970 - 1974	3,083 (24%)	616.6
1975 - 1980 *	<u>3,730 (20%)</u>	746.0
	12,631	

* 4-1-80

Building department figures as shown in Table 4, provide an update of construction activity since 1970. The entire Valley, of which Hemet is an integral part, is a major growth area in the County. Between 1970 and 1980 alone, the City's total number of dwelling units doubled - totalling 12,750 units.

TABLE 4
RESIDENTIAL BUILDING PERMITS
1970 THROUGH 1984

<u>Year</u>	<u>Single Family</u>	<u>Duplex- Fourplex*</u>	<u>Apartments*</u>	<u>Mobile Homes</u>	<u>Total</u>
1970	108	5	17	190	320
1971	177	110	57	711**	1,055**
1972	215	89	189	130	623
1973	140	36	150	137	463
1974	189	36	0	341	566
1975	335	0	49	288	772
1976	299	91	16	308	714
1977	331	107	89	273	800
1978	391	102	126	199	818
1979	293	80	373	163	909
1980	113	20	15	93	237
1981	106	0	0	116	222
1982	173	4	12	82	271
1983	264	24	337	92	717
1984	<u>342</u>	<u>18</u>	<u>204</u>	<u>82</u>	<u>646</u>
TOTAL	3,476	722	1,634	3,205	9,137

SOURCE: City of Hemet Building Department, 1984

* Number of Units

** This total includes four mobile home parks (not subdivision) with 560 units total. The remainder of the total is for mobile home setup permits.

Housing Condition

In September, 1985, the City undertook a windshield survey to determine the number of homes requiring rehabilitation and replacement. The focus of the survey was the structural integrity of residences within the City. Approximately 50 residences were found in need of major rehabilitation or replacement. Their general location is depicted in Figure 4. The type of characteristics generally fulfilling this definition had cracked or sagging foundations, sagging roofs, or were boarded up. While a combination of other characteristics may have established the residences need for rehabilitation or replacement, i.e., broken windows, torn screens, severely chipped or peeling paint, the structural appearance was judged as the most important factor. Residences in need of only repainting or general yard maintenance were not included within the group, nor were the City's more than 4,000 mobilehomes.

This number of homes identified in need of rehabilitation and replacement is substantially below prior surveys, which estimated 520 units in 1977 and 490 units in 1970. Several factors may account for this discrepancy: 1) The survey techniques and criteria used were different than prior surveys; 2) The City's population has increased 31 percent since 1977, placing a high demand upon the need for housing. This could have resulted in higher prices, which in turn triggered a renewed commitment to housing maintenance, and; 3) Due to the City's high growth rate, units were demolished and replaced by new units.

The greatest number of units needing rehabilitation appear in transition areas where single family areas are giving way to multiple family or commercial uses. Some rehabilitation and recycling is naturally occurring in these areas, attesting to the strength of the housing market. With both a low vacancy rate and a significant increase in the population projected for the rest of the century, the projected demand to recycle and rehabilitate substandard units would appear to be viable. As commercial activities locate along Florida Avenue or existing businesses are renovated, there will be certain pressures to upgrade, infill, or densify those areas surrounding the commercial zone. This depends on the type of economic activity occurring in the area. Convenience-type shopping or service establishments will lead to the need to densify surrounding neighborhoods, while regional-serving economies will promote the development of support or external economies (e.g. escrow offices locating near real estate offices). Not only Florida Avenue, but State Street and San Jacinto Avenue have a diversity of economic activities where a range of external changes may occur.

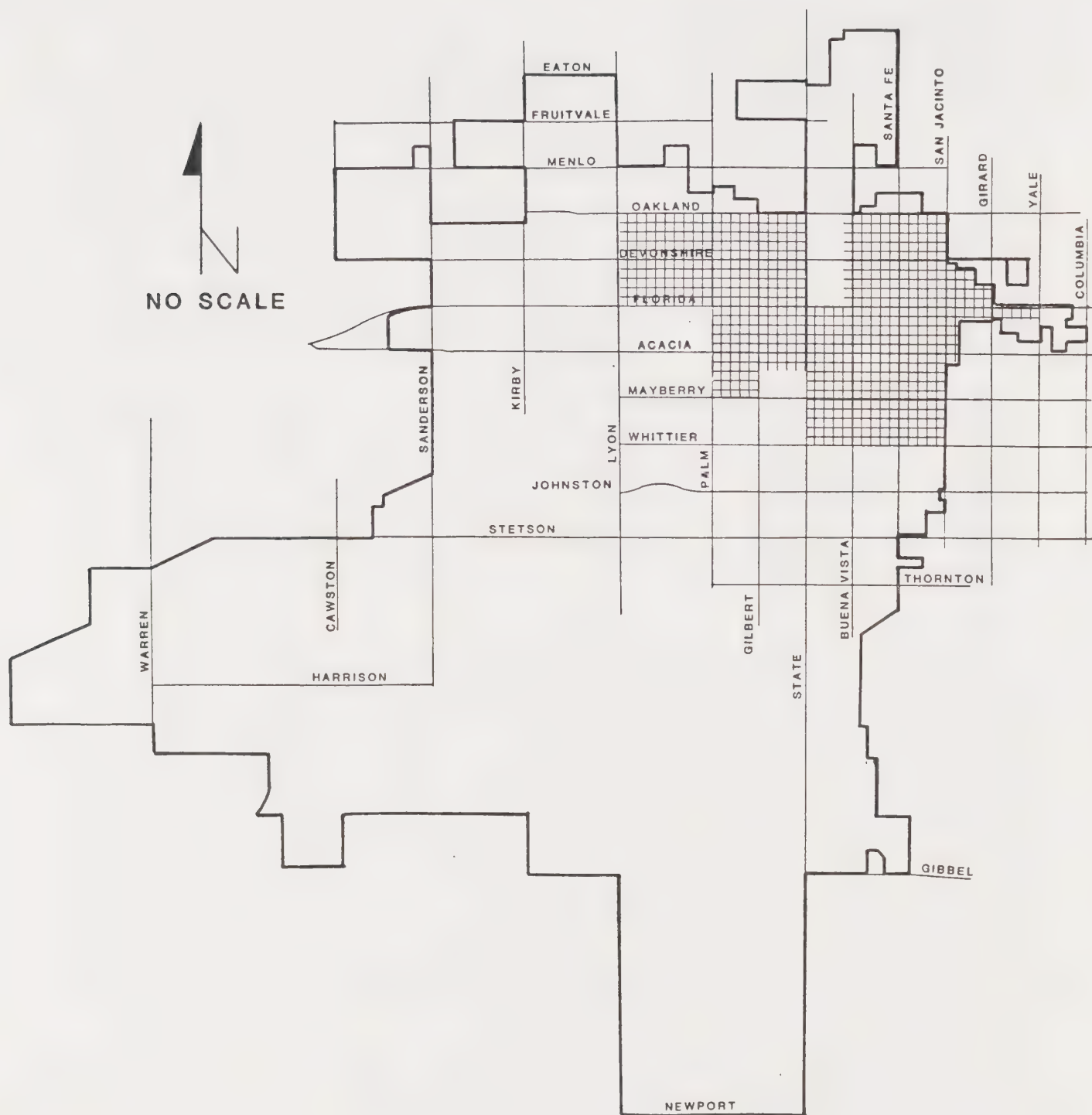
The Riverside County Planning Department surveyed RSA 48 for unsound homes as part of their 1976 Housing Assistance Plan. They determined units unsound if one or more major repairs were required for the unit. The table below depicts their findings.

TABLE 5
RIVERSIDE COUNTY DWELLING UNIT SURVEY
(1976)

<u>AREA</u>	<u>TOTAL D.U. SURVEYED</u>	<u>SOUND D. U.</u>	<u>% OF SAMPLE</u>	<u>SOUND D. U.</u>	<u>% OF SAMPLE</u>
RSA 48	2,597	2,382	91.7	215	8.3
TOTAL COUNTY	17,259	15,302	88.7	1,957	11.3

HOUSING CONDITION

FIGURE 4



KEY

GENERAL LOCATION OF DILAPIDATED
AND DETERIORATED UNITS



SOURCE: PLANNING DEPARTMENT, WINDSHIELD
SURVEY-DEC. 1984

TABLE 6
DWELLING UNIT SURVEY
FOR UNINCORPORATED RIVERSIDE COUNTY
1980

<u>AREA</u>	<u>TOTAL D.U. SURVEYED</u>	<u>SOUND D. U.</u>	<u>% OF SAMPLE</u>	<u>SOUND D. U.</u>	<u>% OF SAMPLE</u>
RSA 48	13,503	13,143	97.3	360	7.5
TOTAL COUNTY	99,505	94,699	95.2	4,806	100.

SOURCE: Riverside County Draft Housing Element, 1984

Housing Tenure

Most households in Hemet/San Jacinto Valley would appear to be homeowner households based on the 1980 Census figures. The homeowner and renter percentages are shown below:

	OCCUPANCY (1980 Census)			
	<u>HEMET</u>		<u>VALLEY AREA</u>	
	<u>1970</u>	<u>1980</u>	<u>1970</u>	<u>1980</u>
Homeowner	70%	64%	68%	70%
Renter	24%	27%	26%	26%
Vacant	6%	9%	6%	4%

The high growth rate in Hemet has created a city out of what once was an agricultural community with large families. The surge of in-migration over the last two decades quadrupled the size of Hemet from 5,416 in 1960 to 22,454 in 1980, and it is not surprising to find over one half of the present residents have lived in Hemet less than five years. The 1980 Census revealed the following information as to the date individuals moved to Hemet and the Valley.

TABLE 7
LENGTH OF RESIDENCY

<u>Move-In Date</u>	<u>Hemet</u>	<u>Unincorporated Portion of RSA 48</u>
1949 or before	132 (1%)	121 (1%)
1950 - 1959	190 (1%)	339 (2%)
1960 - 1969	1,692 (15%)	1,677 (12%)
1970 - 1974	2,587 (23%)	2,772 (21%)
1975 - 1978	3,975 (35%)	5,456 (41%)
1979 - 1980*	2,819 (25%)	3,143 (23%)

*4/1/80

SOURCE: 1980 Census

The particularly high ratio of newcomers to long-time residents in Hemet seems partly due to the elderly composition of both groups.

Vacancy

In 1970, overall vacancy rates were lower than they are at the present time as shown below. Prior to the 1980 Census a number of apartments were constructed increasing supply beyond demand. Contact with rental management agencies in 1984 found the rental rate decreased significantly to about 3%.

TABLE 8
VACANCY RATE

	<u>HEMET</u>		<u>RIVERSIDE COUNTY</u>	
	<u>1970</u>	<u>1980</u>	<u>1970</u>	<u>1980 *</u>
Homeowner	1.8%	3.14%	2.1%	5%
Renter	7.7%	11.78%	7.2%	9.5%
Overall	5.6%	5.87%	14.7%	6.2%

*Unincorporated portion only

TABLE 9
RENTAL PAYMENTS

<u>RENT RANGES</u>	<u>RENTER OCCUPIED UNITS</u>	
	<u>NUMBER</u>	<u>PERCENTAGE</u>
\$ 50 or less	18	.6%
50 to \$ 99	328	10.2%
100 to 149	431	13.5%
150 to 199	711	22.2%
200 to 299	1,213	37.9%
300 to 399	439	13.7%
400 to 499	54	1.7%
500 or more	10	.3%

Monthly median rent: \$208.00

SOURCE: 1980 Census

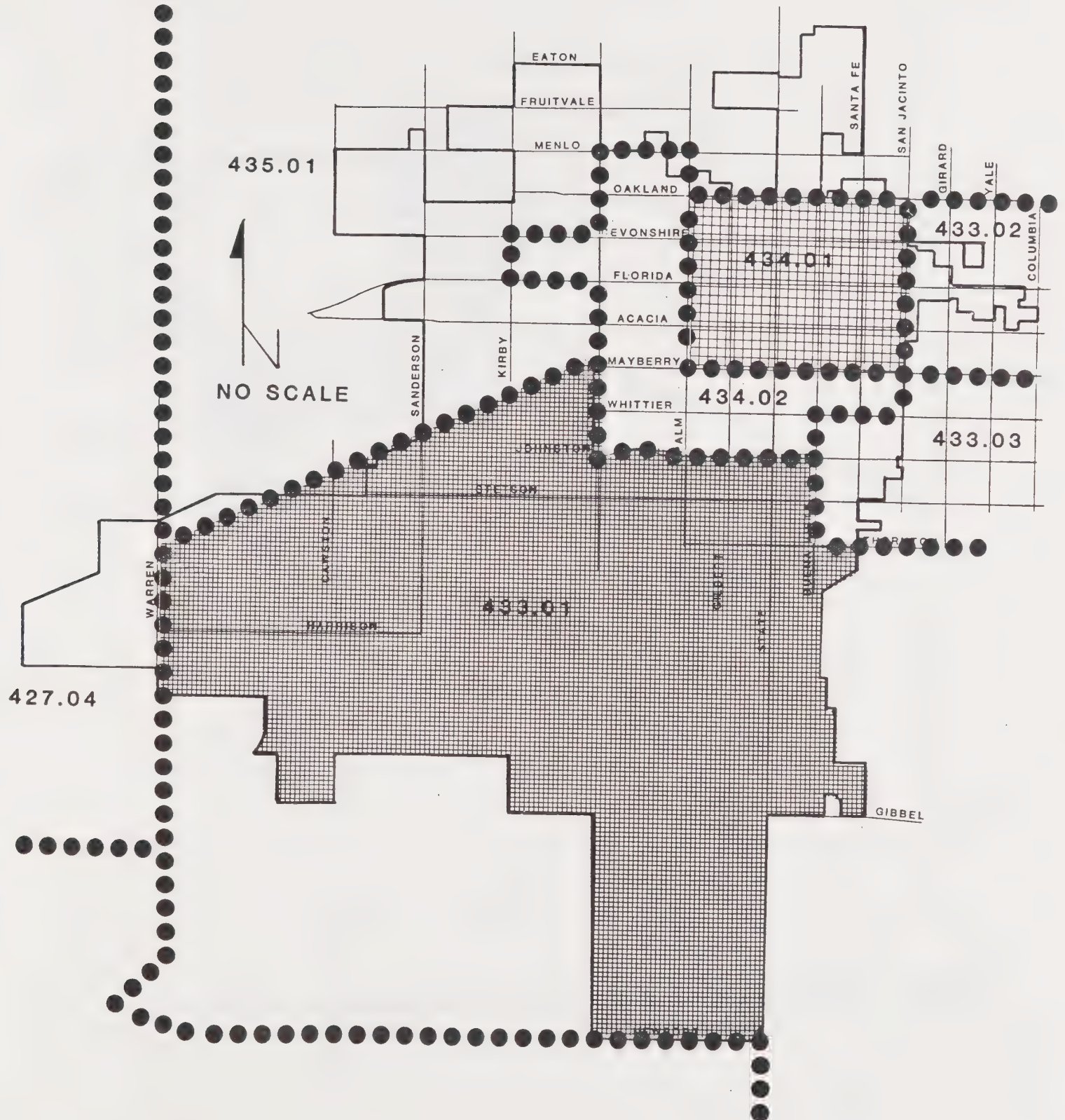
According to the 1977 Hemet Special Census, the median rent for multiple and single family units in 1977 was approximately \$130 per month, a 61 percent increase over the median rent of \$80 per month in 1970. Some mobile home space rentals may be included in this average, which would have slightly lowered the median figure. The median home mortgage payment in 1977 was approximately \$155 per month. Monthly owner costs including mortgage costs increased to \$284.00 per month in 1980. This figure includes other owner cost such as utilities. Based upon the monthly cost of nonmortgaged units, the median mortgage cost would be approximately \$200.00. Figures 5 and 6 illustrate the spatial distribution of home mortgage costs and rental ranges as based on the 1980 Census for the City.

MONTHLY HOUSING COSTS

V-11

FOR MORTGAGED UNITS BY CENSUS TRACT

FIGURE 5



KEY

LESS THAN \$250



\$250-\$300



OVER \$300

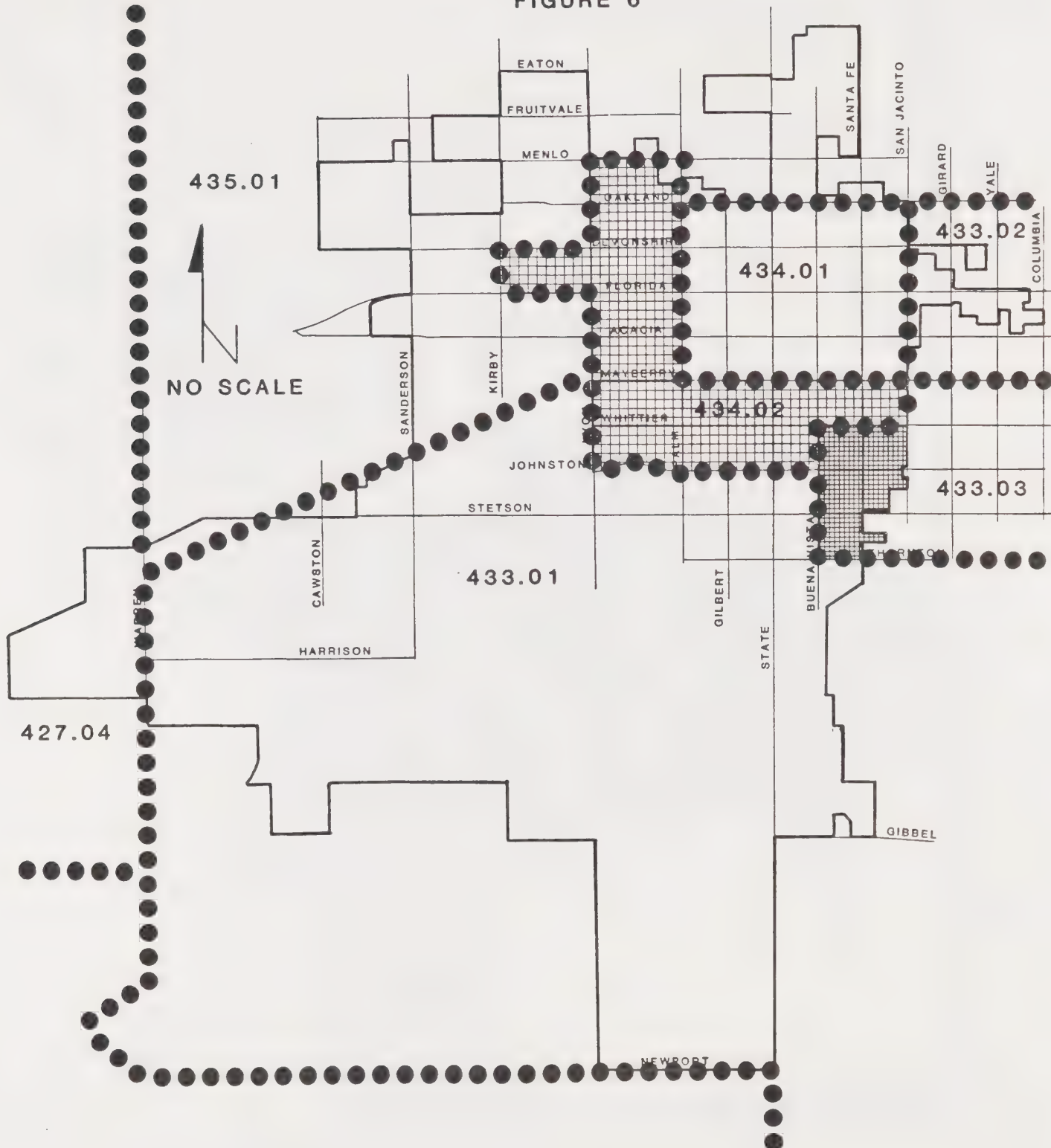


SOURCE : 1980 CENSUS

MEDIAN RENTS

BY CENSUS TRACTS

FIGURE 6



KEY

RENTS PER MONTH

LESS THAN \$200

\$200-250

OVER \$250



SOURCE : 1980 CENSUS

Information from rental management agencies in 1984 revealed the following information:

APARTMENT RENTAL RANGES

Studio	\$175 - \$250
1 bedroom, 1 bath	\$250 - \$325
2 bedroom, 1 bath	\$375 - \$425
2 bedroom, 2 bath	\$375 - \$475
3 bedroom, 2 bath	\$450 and up

SOURCE: Hemet Community Development Department, March, 1984

Home Values

In 1970 the median home value in Hemet was \$17,200. By 1980 it had dramatically increased to \$53,900. In 1975 and 1980 the unit value breakdown was as follows:

TABLE 10

HOME VALUES

VALUE	CITY	
	1975 (1)	1980 (2)
0 to \$9,999	7.7%	1.1%
10,000 to 14,999	23.8%	.8%
15,000 to 19,999	42.3%	1.8%
20,000 to 24,999	15.3%	2.8%
25,000 to 34,999	10.1%	9.2%
35,000 to 49,999	0.7%	27.7%
50,000 or more	0.2%	56.6%

SOURCE: (1) Riverside County Department of Development as based on 1970 U.S. Census information.

(2) 1980 Census - Owner Occupied Units

The significant increase in home values was caused by the accelerated growth in housing prices which occurred during the decade. A further investigation of the 1980 housing values would find the 1975 housing scale used above inappropriate to express the expanded range of housing values in 1980, as shown below.

<u>HOUSING VALUE</u>	<u>PERCENTAGE OF TOTAL HOUSING UNITS</u>
\$ 50,000 to \$79,999	50.2%
80,000 to 99,999	4.9%
100,000 or more	1.4%

These values are reflective of the present prices of homes in Hemet. The price range in Hemet is approximately \$55,000 to \$95,000 for two and three bedroom units. These units are primarily on 6,000 square foot lots, although prices over \$80,000 can be found primarily for larger lots. The unincorporated County area around the City has the potential for a wider range of prices due to larger lot sizes and varying topography, i.e., hillside homes, although recent sales prices are similar to the City. The prices in the valley are very favorable when compared with the median price of a detached and attached home in Los Angeles (\$133,723 and \$103,473 respectively) or Orange County (\$184,285 and \$93,709), as found in the last quarter of 1983.

The large immigration to Riverside County is due in part to the high housing prices in adjoining Counties.

Rental Costs

The median rent in 1970, according to the 1970 Census information was \$80 per month. This increased to \$208 per month in 1980. Overall, mobile home space rentals are considerably lower than apartment rents. Most households owning mobile homes are either part of a subdivision or rent space in a mobile home park. The 1981-82 Housing Element indicated the older and smaller mobile home parks generally provide rental space for under \$100 per month (between \$75 and \$95 per month) but some are as low as \$50 to \$70 per month. The larger, more modern mobile home parks general rent spaces between \$100 and \$130 per month, but the rental charges in some of these parks extend upwards to \$195 per month. A rent survey conducted in the Winter of 1984, found an average rent of \$163.00 (rent and utilities). No rents were found under \$100.00 or over \$200.00 in the City.

As a result of a ballot initiative approved by the voters of Hemet in 1979, the City Council adopted Ordinance No. 772, which established a Rent Review Commission to conduct hearings on mobile home rent issues in the City. On the submission of a petition by more than 50% of the tenants of a mobile home park, the Rent Review Commission conducts a hearing on a proposed rent or service charge adjustment.

Based upon evidence presented at the hearing, the Commission may reduce, increase or leave as is the rent or service charge for park space occupancy.

Population and Household Characteristics

Population

The most recent population figure from the U.S. Bureau of the Census showed a population of 22,454 persons residing in the City of Hemet. The State Department of Finance's January 1, 1984, population estimate for Hemet was 26,370, reflecting an increase of 3,916 or 17.4% increase over the 1980 Census figure.

The population for the 1980 total unincorporated area of RSA 48 was 32,948 persons in 1980. Most of the developed area of the unincorporated County area is adjacent to the City and within its sphere of influence. RSA 48 has approximately 9.4% of the total County population as of 1980.

Population Projections

Table 11 provides a comparison of projected population growth for Hemet and the surrounding Valley, which was contained within the 1982 Housing Element. The growth rate was established based upon an 8% annual increase in population which occurred between 1970 and 1977. During those years the City grew from 12,252 to 19,237, for an average annual increase of 998 people.

TABLE 11

POPULATION PROJECTIONS BASED ON THE 1970-1977 TREND
(8% Simple Annual Growth Rate)

	<u>1978 Base</u>	<u>1990</u>	<u>Increase 1978-1990</u>	<u>2000</u>	<u>Increase 1990-2000</u>
Hemet	20,033	39,265	(19,232)	55,290	(16,025)
San Jacinto	6,317	12,381	(6,064)	17,434	(5,053)
Unincorporated County	<u>29,085</u>	<u>57,007</u>	<u>(27,922)</u>	<u>80,275</u>	<u>(23,268)</u>
RSA 48	53,435	108,653	(53,218)	152,999	(44,346)

SOURCE: Ultrasystems, Inc., 1979, utilized for 1982 Housing Element

Recently this trend has changed. Although the average annual increase in the population is approximately the same, 979 people from 1980 to 1984 compared with 998 people from 1970 to 1977, or 1,020 people from 1970 to 1980, the average annual percentage has decreased to 4.35 percent. This percentage decrease will continue unless the number of new persons per year substantially increases in the future.

Due to the constant population increase over the last 14 years of approximately 1,000 persons per year it is estimated the City would reach the following size:

	<u>1984</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
HEMET	26,370*	32,370	37,370	42,370

* State Department of finance

This projection would seem to be a more reasonable assumption based upon past trends, than assigning a percentage increase, which as of late has not been consistent with City growth patterns. The City has therefore projected the potential number of people that could reside within Hemet at some future date. Projecting development densities of currently vacant land (generally, four acres and above), based upon actual development densities, and adding land area to the City through annexations, could provide for a population of approximately 80,000 persons.

The County growth rate shown in Table 12 is consistent with SCAG-82, a growth projection report prepared by the Southern California Association of Governments in 1982.

GROWTH PROJECTIONS

TABLE 12

	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Hemet *1	22,454	30,464	38,474	46,484	54,494
Unincorporated portion of RSA 48 ²	32,948	40,670	47,070	51,370	56,100
Unincorporated portion of Riverside County ²	663,166				1,201,500

1 The Hemet projections utilized a simple 8 percent growth increase modifying the total to reflect the 1980 Census information.

2 County population projections

Age Characteristics

Hemet's population profile is the opposite of most cities in the county. Senior citizens (60 and over) rather than youth represent the largest age group. The age breakdown from the 1977 Special Census and 1980 General Census are shown in Figure 6.

The median age in Hemet has remained consistently high over the last seven (7) years. It reached a peak of 65 in 1977. The Riverside County Planning Department reports that the median age in the County is 36.1. The over 65 age group makes up 16.3% of the population in the County.

Ethnic Characteristics

Hemet is predominately a white elderly community with few minority groups. Mexicans (nationality) represented the largest ethnic minority in 1980 with 6.2 percent of the total population. The breakdown for ethnic groups is shown in Table 15.

AGE BREAKDOWN-CITY/COUNTY

FIGURE 7

HEMET 1977
MEDIAN AGE:65

HEMET 1980
MEDIAN AGE:64.2

UNINCORPORATED PORTION
OF RSA 48 - 1980
MEDIAN AGE:43.7

UNINCORPORATED PORTION
OF RIVERSIDE COUNTY - 1980
MEDIAN AGE:36.1

SOURCE: 1977 HOUSING
ELEMENT
1980 CENSUS
RIVERSIDE
COUNTY
PLANNING
DEPARTMENT
1984

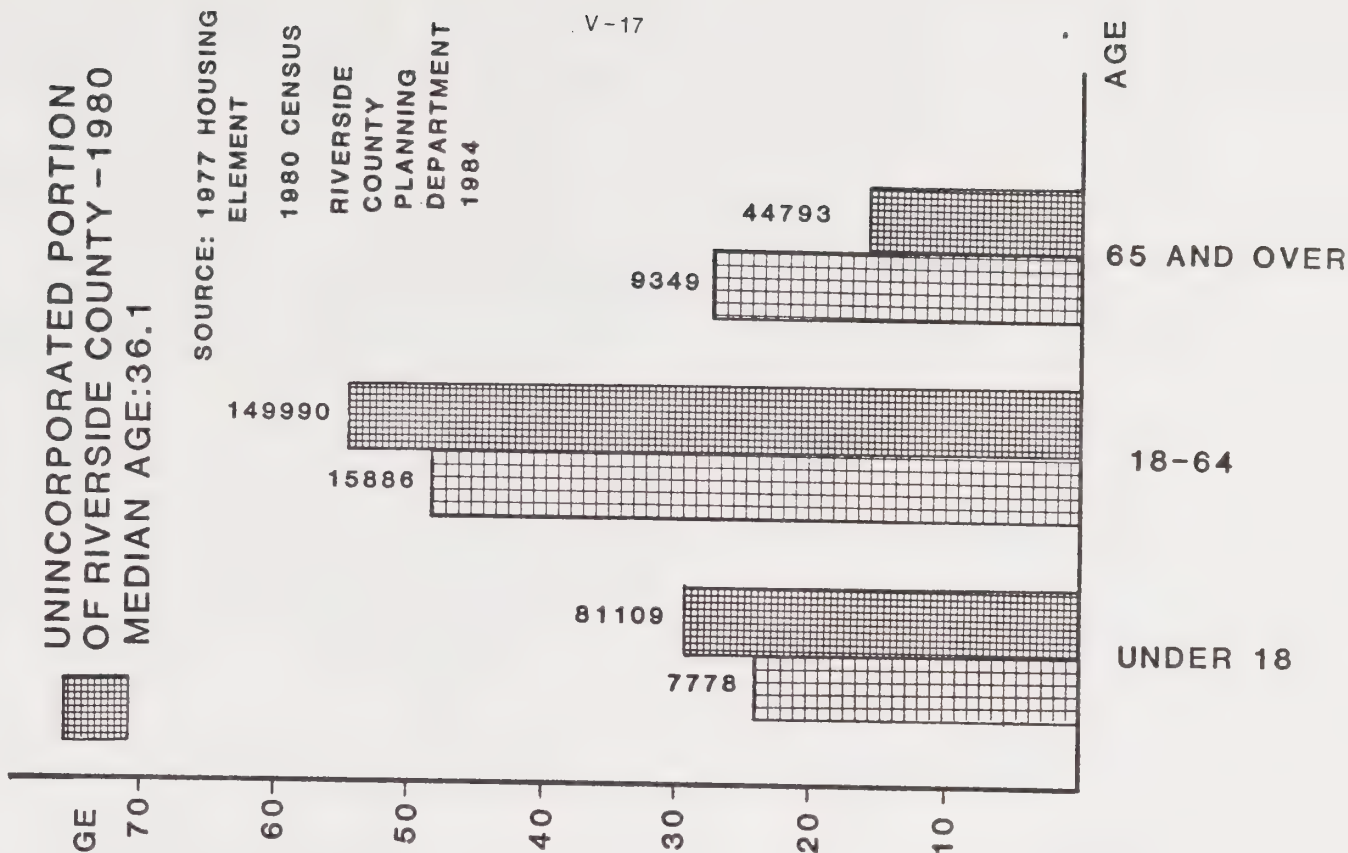


TABLE 13

ETHNIC CHARACTERISTICS

	<u>HEMET</u>	<u>UNINCORPORATED PORTION OF RSA 48</u>	<u>UNINCORPORATED PORTION OF COUNTY</u>
White	20,485 / 91.2%	30,877 / 86.5%	232,015 / 72.5%
Black	17 / .1%	23 / .1%	11,961 / 3.7%
American Indian	128 / .6%	592 / 1.7%	3,548 / 1.1%
Asian, Pacific Islander	134 / .6%	184 / .5%	3,661 / 1.1%
Other	66 / .3%	1,337 / 3.7%	23,827 / 7.4%
Hispanic	<u>1,624 / 7.2%</u>	<u>2,692 / 7.5%</u>	<u>45,237 / 14. %</u>
	22,454 / 100.0%	35,705 / 100. %	320,249 / 100. %

*See subtable below

	<u>HEMET</u>	<u>PERCENTAGE OF TOTAL POPULATION</u>
Hispanic		
Mexican	1,399 / 86.1%	6.2%
Puerto Rican	24 / 1.5%	.1%
Cuban	4 / .23%	.01%
Other	<u>197 /</u>	.87%
	1,624 / 100. %	

Household Size

SCAG expects the entire Southern California region to experience a higher rate of housing growth than population growth. This increase in household formation over population growth is due to a forecasted decrease in household size which is already apparent in available statistics.

The household size in the City was 2.08 persons per dwelling unit in the 1970 Census, dropping to 1.92 persons per dwelling unit in the 1977 Special Census, and 1.9 in the 1980 Census.

In 1970, household size in Hemet (2.08 persons/unit) was less than that for Riverside County (2.97) and California (2.95). By the year 2000, Riverside County is projected to have a household size of 2.14 persons per dwelling unit, the lowest persons per dwelling unit for any county in the SCAG region. It is expected that the household size will remain between 1.9 and 2.0 due to the number of elderly housing projects proposed and the market emphasis on adult developments. At present the City does not have any data on the number of individuals per household by housing type.

Household Type

Considering the elderly composition of Hemet, it would appear that most households would consist of married couples, with a significant number of widows and widowers. 62.3% of the households in Hemet are elderly (65 years of age or more). 42.% of the households in the unincorporated portion of RSA 48 are elderly.

Income and Employment

Hemet was statistically defined as a low income community based on the results from the 1977 Special Census conducted by the State Department of Finance. The low income status may partially be attributed to the retirement status of the population. For example, there may be sources of income or savings deposits and investments that are not reported in the census results. Table 16 below testifies to the amount of savings deposits in the City. While some of the savings could be accounted for by persons residing in the County, it does give an indication that the income levels of City residents is not reflective of personal wealth.

In 1970, Hemet appeared to have a greater proportion of families with annual income less than \$9,000 than either the Hemet/San Jacinto Valley or Riverside County. This difference was considerable in comparison with the County, but only slight in relationship to the Valley. The median incomes for Hemet and the Valley were nearly the same - \$6,018 and \$6,331, respectively.

The median household income increased by \$1,300 (22%) from \$6,018 in 1970 to \$7,342 in 1977, and by \$3,554 (48%) from 1977 to a 1980 figure of \$10,896.

Family income figures from the City and the County (See Figure 7) identifies the concentration of people at the lower income levels. This differs substantially with the amount of personal value/wealth of citizens based upon savings and loan balances shown on the previous table.

In Hemet, the median income is based largely on two-person households rather than the average four-person household composition of most cities. The median income in Hemet reflects the retirement status of senior citizens without the financial obligations of raising children. While the median income is lower than that of other cities, for the most part, the cost of living for retired persons is generally less. This assumption makes the comparison of median incomes between Hemet, the County and other cities in California less revealing.

With this information on the work force in Hemet, it is not surprising that two-thirds of all the families in the City cited social security as a source of income -- more than in the County or the Valley area. Hemet also had a large percentage of families with income sources not listed (see Figure 8). This is significant in that it may indicate that the income actually reported by the heads of households may not reflect the total funds available to them. This data may not reveal an accurate picture of the purchasing or renting power of each family in the housing market. Other sources of income and assets, including savings accounts and the proceeds from the sale of a previous home, that may have helped purchase a new home, may not have been reported as income to census takers. Recent records of total savings and checking accounts deposits in banks in Hemet indicate that the Hemet area has the second highest dollar amount per capita in the nation. This information would seem to be an important ingredient in determining purchasing power for housing.

SAVINGS & LOAN BALANCES TOP TEN RIVERSIDE COUNTY CITIES

(By Population Rank - 1Q & 2Q 1984 Comparisons)

N.A. - Not Available

* State Dept. of
Finance Est. 1/84
(X) \$000

CITY	* POP.	NO. OF BRANCHES	March 31, 1984		June 30, 1984		\$ GAINS SINCE 1Q '84 (X)	3/84 ACC'T AVG	6/84 ACC'T AVG
			NO. OF ACCOUNTS	SAVINGS BALANCES (X)	NO. OF ACCOUNTS	SAVINGS BALANCES (X)			
RIVERSIDE	179,709	24	93,103	\$ 770,800	96,099	\$807,661	\$36,861	\$ 8,279	\$ 8,404
CORONA	41,663	6	20,871	114,346	21,648	124,316	9,970	5,478	5,743
PALM SPRINGS	37,720	18	42,268	456,622	43,143	476,795	20,173	10,803	11,052
INDIO	26,600	4	14,735	81,863	15,092	82,207	344	5,556	5,447
HEMET	26,370	24	76,955	788,913	81,631	824,935	36,022	10,244	10,106
NORCO	21,839	2	7,918	26,198	8,242	26,259	61	3,309	3,186
BANNING	15,732	2	8,968	49,189	9,179	50,469	1,280	5,485	5,498
CATHEDRAL CITY	14,796	3	6,166	52,723	6,354	53,257	534	8,551	8,382
PALM DESERT	14,553	13	15,173	188,405	17,191	217,151	28,746	12,417	12,632
COACHELLA	11,980	1	1,588	5,979	N.A.	N.A.	-----	3,765	-----

HEMET RECAP (3/84 thru 6/84)

GAINS: No. of Accounts + 4,676 (Up 6.1%)
Savings balances + \$36.0 million (Up 4.6%)
Account dollar average - \$138,000 (Down 1.0%)

SOURCE: Home Loan Bank of San Francisco

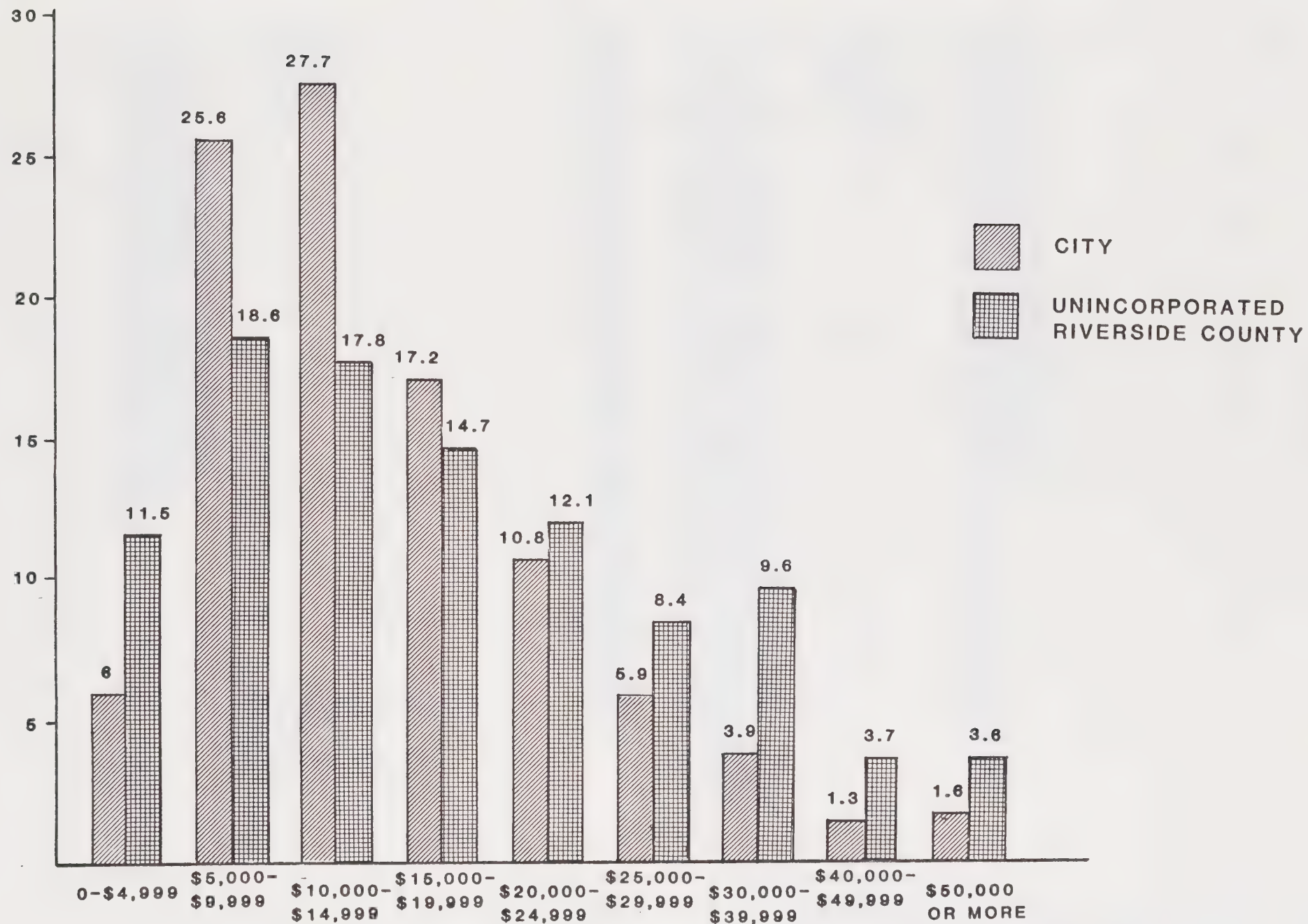
FROM: Economic Development Dept.
CITY OF HEMET 12/84

INCOME CATEGORIES

BY NUMBER OF FAMILIES(1980)

FIGURE 8

PERCENTAGE



YEARLY INCOME RANGE

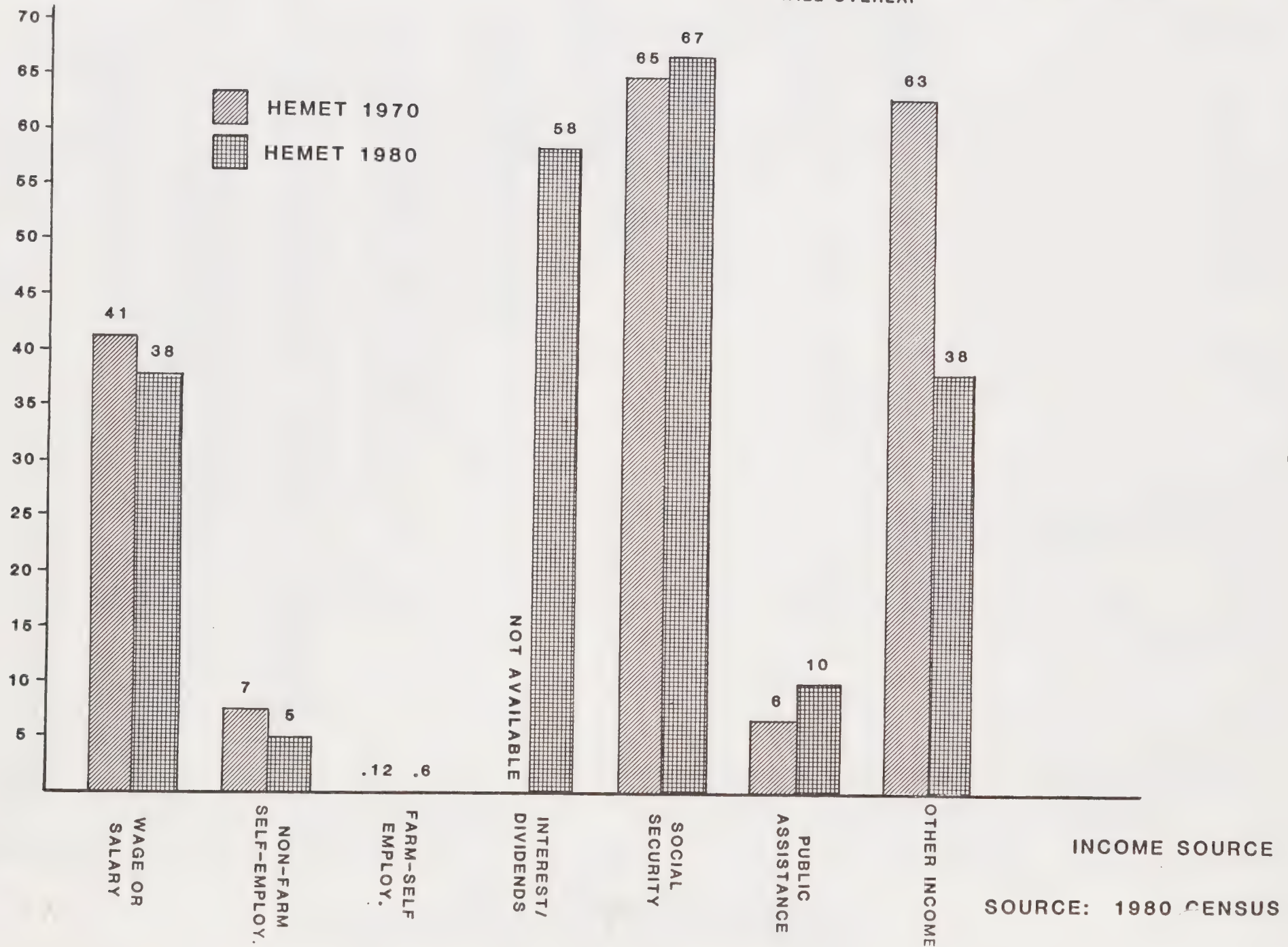
SOURCE: 1980 CENSUS

SOURCES OF FAMILY INCOME

FIGURE 9

NOTE: THE PERCENTAGES ARE BASED UPON THE TOTAL NUMBER OF FAMILIES. SOME INCOME SOURCES WILL OVERLAP

PERCENTAGE



Work Trip

A high percentage of individuals living within the City work within or near the City as evidenced by the following table:

COMMUTING TIME

Less than 15 minutes	80%
15 to 30 minutes	9%
31 to 60 minutes	8%
Over one hour	3%

MRI Community Economic Awareness Study: September, 1982.

The mean commuting time for the unincorporated portion of RSA 48 is 17.93 minutes.

The City of Hemet has undertaken a wide range of economic development activities to encourage the establishment of new businesses in the community. Among the activities to encourage was the hiring of an economic development coordinator. This individual has prepared sales data and retail trends about the community and spearheaded a wide ranging advertising campaign to inform prospective businesses about the community. The City has also prepared a commercial and industrial land use inventory utilizing Community Development Block Grant funding. The inventory identifies vacant parcels, location of adjacent utilities and whether additional street dedication is necessary.

The combination of these and other economic development activities will promote job/housing balance within the community and lead to the reduction of commuters.

HOUSING PROBLEMS AND NEEDS

In order to develop strategies and programs to ensure that all economic segments of the community are provided adequate housing opportunities, the community's housing needs and problems must be accurately assessed. The previous section presented an overview of the City's housing and population characteristics. This section attempts to quantify the City's housing needs to establish a basis for the formulation of housing goals, policies, and programs.

In accordance with State guidelines, this section must address the following housing needs: (1) immediate housing needs in terms of affordability over-crowding, the suitability/habitability; (2) special needs of the elderly, handicapped, minorities, families and mobile home residents; and (3) market-rate housing needs over a five-year period, taking into consideration anticipated housing, population, employment and household growth.

Immediate Housing NeedAffordability

State housing policy recognizes that the cooperation participation of the private and public sectors is necessary to expand housing opportunities to all segments of the population. A primary goal is the provision of a decent home and a satisfying environment that is within the economic means of the households who occupy it. The private sector is generally responsive to the majority of the community's housing needs through the production of market rate housing. However, in certain areas where the housing supply is limited or demand is unusually high, housing opportunities are restricted, especially to households with low and moderate incomes.

The United State Department of Housing and Urban Development defines very low income households as those earning less than 50 percent of the County-wide median income, low income households as those earning less than 80 percent of the median income, and moderate income households as those earning between 80 and 120 percent of the areawide median income, all adjusted for household size. The Department of Housing and Urban Development recently released the following median income figures for Riverside County for July, 1984:

<u>Income</u>	<u># of Persons/Family</u>
\$ 18,200	1
20,800	2
23,400	3
26,000	4

The inability to afford suitable housing is a problem that is greatest among lower income households. A cross-tabulation of household income and housing costs using data from the 1980 Census suggests that a greater percentage of renters (60% of all renters) spent more than 25% of their incomes on housing than homeowners (7% of all homeowners), although homeowner households clearly outnumbered renter households. Among all households 54% were paying in excess of 25% of their incomes on the cost of housing.

A notable change in the information shown above is the number of renters paying more than 25 percent of their income. This percentage increased from 26 percent, according to the 1977 Sepcial Census, to 60 percent. Although the reason for this drastic change is unknown, several items are worth mentioning:

1. Between the 1977 Special Census and 1980 Federal Census 1,588 apartment units were constructed. This was an 80.5% increase over the number of apartments in the City in 1977.
2. The City is primarily a retirement community. As such, individuals no longer receive salaried incomes and must live off savings, social security or other stored wealth.
3. The median household income in the City is 67.9% of the Unincorporated County median income level.
4. County census tracts to the north and east also exhibit low median income levels. Census Tract 435.01 north of the City has a median income level that is 73.5% of the Unincorporated County median income level, while Census Tract 433.02 east of the City has a median income level that is 82% of the County income level.

All census tracts in the City, except one that does not have any rental units and one that has 48 percent of the renter occupied housing units paying 25% or more of their income on rent, have 50 percent or more of the renter occupied units paying 25% or more of their income on rent. A general criteria for housing affordability is recognized for lower income households as 25% of their monthly income and 30% for moderate income households. A correlation of the number of people below the poverty level and those renters paying 25% or more of their income on rent by census tracts has been made below. The tracts with the highest amount of individuals below the poverty line are also the tracts with the highest number of renters paying 25% or more of their income on rent.

Tract	Renter Occupied Housing Units (Gross rent as a percentage of income) 25% of more		Population Below Poverty Level for each Census Tract	
	Number	Percent	Number	Percent
427.04	0	0	0	0
433.01	222	63%	219	5%
433.02	164	57%	58	10.7%
433.03	94	48%	122	6%
434.01	706	67%	817	16.8%
434.02	560	56%	807	10.4%
435.01	254	57%	277	11.2%

Lower Income Households Needing Assistance

Fair share allocations are an attempt by SCAG to improve access of moderate and lower-income persons to the region's jobs and amenities by encouraging communities where these households cannot afford to live to provide appropriately priced housing. The fair share allocation is the number of added households in each income category who should have housing opportunities in each community. It also indicates the number of households that a community should release to surrounding communities in the sub-region to balance the economic burden for housing provisions. The Regional Housing Allocation Model, designed to redistribute the region's total existing households to further housing opportunities, was implemented for urban regions only.

The SCAG Regional Housing Allocation Model indicates 689 very low, 876 low, 547 moderate, 612 upper income units must be provided in the City between 1983 and 1988. As discussed in previous sections, the number of households with a low income in Hemet is not indicative of the community's need for low income housing units when compared to savings accounts. Although there are poor individuals, who may also be retired, a sizable portion pay cash for new housing even though they are retired. The sale of their previous home pays for their new home in Hemet.

Special Groups

By virtue of their age, the majority of the people in Hemet are considered to be a special group according to the Department of Housing and Community Development Guidelines. While indicators of need appear to be subjective, the elderly embody a particular life-style exemplified by changes in living arrangements that are frequently involuntary and unwelcome. These changes can include the death of a spouse, impairments in functional abilities, and retirement in general. Hemet is unique in that it is a city to which senior citizens have come by choice to live out their later life with greater ease and pleasure than an urban area might permit. Comradery with other elderly persons, a slower paced life, and proximity to recreational facilities, hospitals, churches and senior facilities are important locational considerations.

Although many elderly persons are independent and find retirement enjoyable, others find difficulty in living with retirement for either physical or emotional reasons. Some become dependent due to disabilities and economic deprivations and they must seek institutional care, assistance in the home, or special forms of community support. For all of the elderly, however, there is a central need for the addition of a broad range of service delivery systems to direct housing supply which can address the constraints of dependent elderly and the preferences of the active senior citizens. A combination of physical, social, and income-supporting services are vital to a full housing program for the elderly.

There are approximately 425 elderly that live in rest homes in the City, mostly located in proximity to Hemet Valley Hospital. Their particular need for medical attention limits their mobility and impact on City facilities and functions. But, the environment surrounding the rest homes should be compatible with the degree of safety and quiet which the elderly residents require.

Handicapped households represent a significant factor in the area. Figures available for the unincorporated County area indicate that 24.3% of RSA 48 has one or more persons in the household who is handicapped. This represents 13.11% of the County total.

Although statistics are unavailable, it is safe to assume that the City has an equally high or higher rate of handicapped persons due to the elderly makeup of the population.

Families with children represent a minority group in Hemet - 13% of the population is less than 19 years old (public school age). Based on information from the 1975 Housing Element regarding overcrowding, housing types, school location and population counts, families with children appear to reside near the commercial core along Florida Avenue, on the east and southeast sides of the City, and in the County unincorporated area east of Hemet. Children generate the need for recreational facilities, schools, and safe pedestrian environments as well as larger housing units.

Mobile home residents represent a special group for consideration in the Housing Element. According to recent Building Department information, there are approximately 5,379 mobile homes in the City, representing about 37% of the City's housing stock. With 1.67 persons per household, the number of mobile home occupants in the City is estimated to be 9,000 persons. The previous section on Housing Types gives greater detail on the mobile home distribution within the City.

Seasonal residents represent another special group since they increase the population over the winter months. During 1977, it was estimated by the Riverside County Annual Overall Economic Development Report, that as many as 8,000 winter visitors came to the Hemet/San Jacinto Valley, mostly in recreational vehicles and mobile homes.

Hemet has three recreational vehicle parks, accommodating 622 vehicles, as shown on Figure 2. The parks are located in the north central and westerly parts of the City. The visitors increase traffic around residential neighborhoods and the impact of their short-term presence may upset the neighborhood balance. This is somewhat off-set by the purchasing power of vacant residents who significantly contribute to City revenues. The Hemet Chamber of Commerce has indicated that part-time residents spend 10 million dollars in the community annually.

The presence of seasonable visitors generates increased demand for the use of restaurants, retail, and recreational facilities. Externalities, such as, increased traffic congestion, demand for medical services, and increased use of recreational facilities have not been measured with regards to this phenomena. The balance of benefit-cost to the community is of vital importance.

Overcrowding

The 1980 Census indicates that 9.7 percent of the housing units in Hemet were overcrowded (1.01 or more persons per room). 2.7 percent of the housing units were overcrowded in the unincorporated portion of RSA 48. As illustrated in the following figure, the greatest number of overcrowded units in Hemet was identified in Census Tracts 433.02, 433.03, and 434.02 near Florida Avenue and on the eastern side of the City where public schools and households with children predominate. A higher percentage of renter-occupied units near Florida were overcrowded (Census Tracts 434.01 and 434.02) since this area contains more apartment buildings. (See Figure 9.)

Suitability/Habitability

In addition to new construction needs of 4,000 to 18,200 units in Hemet by the year 2000, (see population growth demand discussion, Table 23), there was a need to replace 50 units that are severely deteriorated. The number of units suitable for rehabilitation has decreased since 1970. This suggests that the number of household repairs and demolitions have increased since 1970 such that fewer homes have become or remain seriously dilapidated. This topic is discussed in greater detail on Page V-7 Housing Condition.

The rehabilitation and recycling process is slow, but imperative as older units worth salvaging provide lower cost housing for lower income households. Recycling restraints the spread of neighborhood deterioration, maintains neighborhood stability, and provides greater housing opportunities for Hemet residents. In general, if the repair cost of a unit exceeds 50% of the unit value, rehabilitation becomes infeasible and the unit should be replaced.

Prospective Housing Needs

The previous section identified areas in which the City's present housing supply falls short of providing all economic groups of the community and special groups with adequate housing opportunities. Because most of the housing produced by current market forces is not generally available at prices these households can reasonably afford, the public and the private sectors must cooperate to produce and make available housing at less than market rates. Having examined the need for non-market rate households, the Housing Element is now required to address, over a five-year period, based on anticipated population and employment growth, new household formation, and shifting housing preferences.

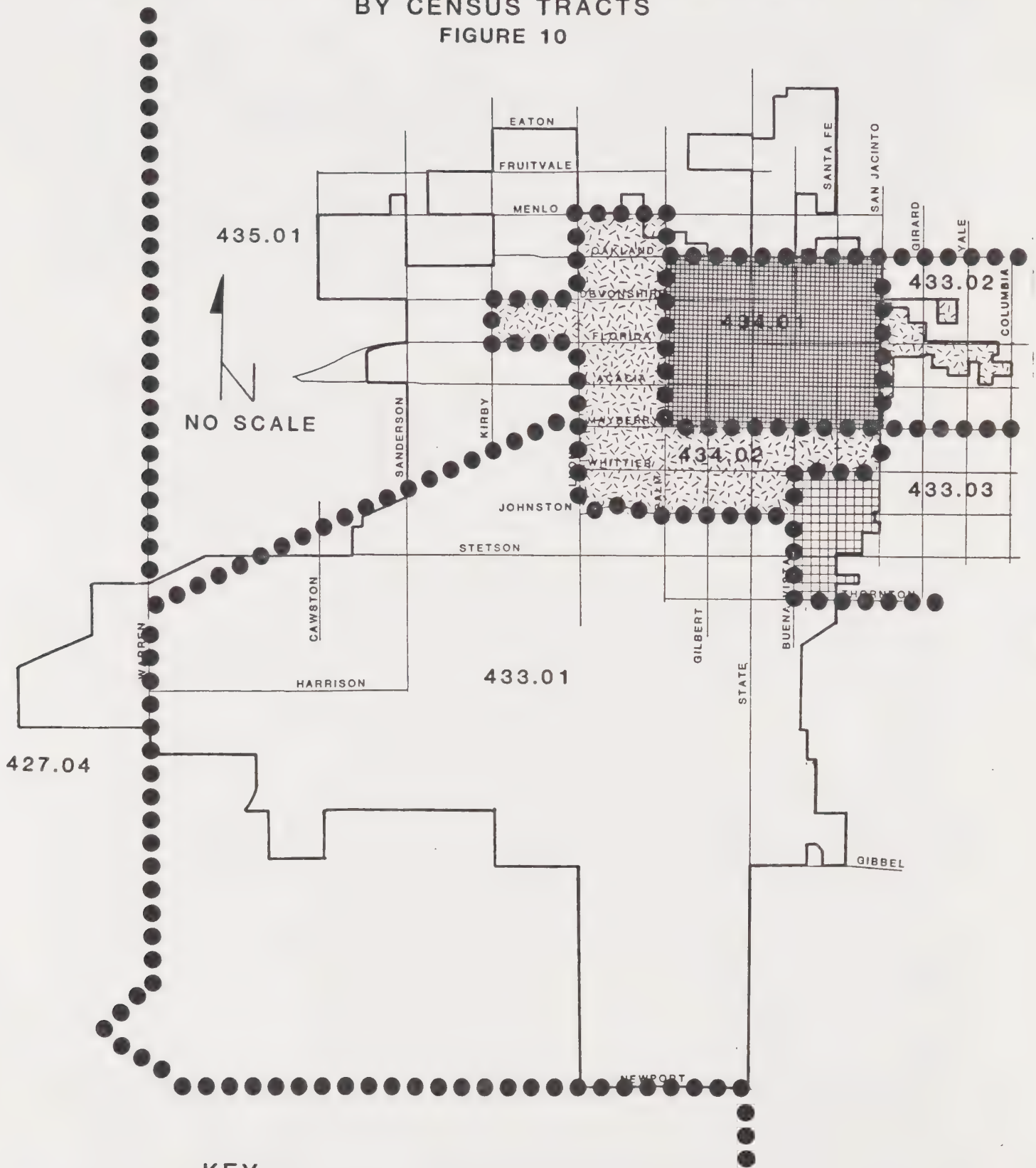
Emergency Shelter

One of the greatest problems with regard to housing is providing emergency shelter to the homeless. Contact with the Adult Protective Services section of the Department of Social Services revealed that at any one time between 100 and 200 people are homeless in the Hemet area, most of whom are elderly (over 55 years of age). Contact with local groups indicated two (2) private agencies are available to help the homeless. The largest group is the Community Food Pantry, which is sponsored by the Hemet/San Jacinto Ministries, involving 33 area churches. The group supplies one (1) night emergency lodging per family and a 3-day supply of non-perishable food. An average of 1,800 families are helped per year. The average family size was 5 individuals. The other group is Saint Vincent De Paul, which will provide one (1) night emergency lodging at a hotel with gift certificates to local grocery stores for food.

PERCENTAGE OF OVERCROWDING

BY CENSUS TRACTS

FIGURE 10



SOURCE : HEMET PLANNING DEPARTMENT

Population Growth Demand

The Hemet market area, which comprises the Hemet/San Jacinto Valley, is projected to reach 106,000 people by the year 2000, an increase of approximately 44,000 over 1980, according to the population projections prepared by SCAG. If 44,000 people (22,000 new units) are added to Hemet between 1980 and 2000, it is expected that a significant proportion of that number could locate in the Valley area outside of the City limits. Table 23 illustrates these forecasts:

TABLE 15

HOUSING UNIT DISTRIBUTION IN UNINCORPORATED AREA OUTSIDE THE CITY

<u>Simple Annual Growth Rate for Hemet</u>	<u>Population Increase from 1980 to 2000</u>	<u>Unit Increase Outside Hemet (2.29 persons/ household*)</u>
SCAG Forecast	33,013	14,416

* 1980 Census

Potential Growth Areas

There are approximately 4,900 acres of vacant land suitable for residential development within the City. A variety of land uses are identified on the Hemet General Plan Land Use Element for these vacant properties ranging from agriculture to high density residential. A number of factors have been used in the evaluation of these properties:

1. Agriculture Land- About 25 percent or 1,200 acres of the vacant land is identified on the Hemet General Plan as Agriculture. The City's Zoning Ordinance does permit agricultural land to be divided into 20,000 square foot parcels, or approximately 2 units per acre.
2. Flooding - A major concern within the City is flooding. The City has adopted a Master Flood Control and Drainage Plan detailing the location and size of flood control improvements within and outside the City.
3. Water and Sewer - Three separate water and sewer agencies operate within the City: Eastern Municipal Water District (EMWD), Lake Hemet Municipal Water District (LHMWD), and the City of Hemet. Water and sewage treatment facilities are adequate within the Valley to meet projected demand.
4. Streets - Identified on the Hemet General Plan Circulation Element are major roads planned throughout the City. Any subdivision of land or major development would require the extension or dedication of existing streets consistent with this Element.

5. Utilities - Natural gas and electrical service is available and both Southern California Gas Company and Southern California Edison Company have adequate supplies to meet demand.

Generally the vacant areas within the City can be separated into those south of Stetson Avenue and those north of Stetson Avenue. The majority of vacant land is located south of Stetson Avenue and totals approximately 3,800 acres. All of the vacant land designated Agriculture is located in this area. Approximately 800 acres of agriculturally designated land is in an Agricultural Preserve. A Notice of Nonrenewal has been filed and the land's status as a Preserve will terminate in 1988.

The majority of land south of Stetson is subject to flooding. In an attempt to alleviate this problem, the City has placed approximately 2,400 acres within Redevelopment Project Area. The City has identified flooding as the major concern within the Project Area and has initiated engineering studies to implement the adopted Master Plan Flood Control and Drainage Plan. Channelization of flood waters will free-up additional land for development. At present development can occur within the flood plain provided building pads are elevated and water retention areas are set-aside to retain the incremental increase in water runoff from the site due to development. This latter item consumes valuable amounts of land and raises the cost of housing construction. Development cannot occur within the Salt Creek Channel alignment, which will be the major flood control facility within the City.

EMWD has major water and sewer lines extending throughout the southern area. All major water lines are in place and can meet projected development of 28,000 families (2 people per family)! Major sewer lines also exist within the area although several other lines must still be constructed to complete the system. As development occurs ¹, connections to these major lines must be made.

Properties to the south of Stetson Avenue can be reached by vehicle, but the road network is not complete. As development occurs, roads must be constructed by developers as a condition of their development. The majority of property south of Stetson Avenue is within areas zoned Planned Community Development (PCD). Such a zone permits a property owner to master plan his property and develop innovative designs and standards most appropriate to fit his site. Although commercial property can be included in a PCD, it is intended primarily for residential development.

Vacant property north of Stetson Avenue totals approximately 1,100 acres, most of which have received some type of development approvals. Flooding is not as significant as those properties to the south. Some flood control improvements will require additional dedication of right-of-way. Sewer and water lines are adequate and can meet the needs of approved and proposed development. Streets exist in the area and will only require additional widening or road bed improvement.

As mentioned earlier, the vacant parcels north of Stetson Avenue have, for the most part, been approved for some type of development. As an example, over 100 acres have been approved for over 1,400 travel trailer units and approximately 140 acres were approved as part of a Specific Plan providing mobile homes, multiple family units and senior apartments.

¹ John Boehm, Eastern Municipal Water District, September, 1985

Overall, the vacant area available for residential development is not seriously constrained by the lack of infrastructure. Although infrastructure may not exist within a particular area, backbone systems or master plans have been prepared to address the needs of the area. The extension or connection to the existing system is the responsibility of the developer and a normal cost of development.

Land available for development in the County is in Diamond Valley, Gible Flats and to the northeast of Hemet, between the Cities of Hemet and San Jacinto. Additional vacant areas available for development exist to the northwest of Hemet. Areas southwest of Hemet, although subject to flooding, can be developed when flooding problems are resolved. Even though the areas east and northeast of Hemet are in close proximity to seismic faults, recent development in the County has been occurring in this area and is expected to continue.

Construction levels in Hemet have generally been high over the last decade. The number of building permits as shown in Table 5, issued annually between 1970 and 1979 rose steadily except for the period between 1972 and 1973 and later between 1980 and 1982, reflecting a high interest rate and general recession in the U.S. economy during those times. This pattern was similar for the unincorporated areas and for San Jacinto as well.

Projected Housing Units

Based upon a simple annual population growth rate of 8%, it is projected that approximately 780 new units need to be built each year between 1980 and 2000. This figure is based upon the Ultra Systems, Inc., projection. The SCAG-82 growth forecast projects regional growth for a six-county area and portions of individual counties. The projection for this area is based upon projected growth in Hemet and San Jacinto and the unincorporated area. The SCAG projection incorporates Hemet projected population estimates.

Regional Housing Allocation Model (RHAM)

In April, 1983, SCAG issued an update to the Regional Housing Allocation Model. These figures are intended to satisfy recently enacted State legislation which requires local housing elements to address the projected housing needs of all economic segments of the community over a 5-year period. These constructions needs as identified by SCAG are as follows:

TABLE 16

1983 - 1988 UNITS NEEDED BY INCOME

HOUSEHOLD INCOME CATEGORY (BASED ON COUNTY MEDIAN)	UNITS NEEDED BY 1988		PERCENT OF NEED
Very low (less than 50%)	689	(827)	24.6%
Low (between 50% - 80%)	876	(1,051)	31.2%
Moderate (between 80% - 120%)	547	(656)	19.5%
High (greater than 120%)	692	(830)	24.7%
TOTAL	2,804	(3,364) ¹	100. %

¹ 20% increase, identifying 1989 requirements.

The allocation of these needs by income groupings were based upon the regional and local income distribution. The 1980 Census was used in determining the local income distribution. A regional component was inserted to balance the distribution of future households in the region so that jurisdictions which are currently impacted by substantial numbers of low income households, will not be further impacted by future low income household growth. The impactation component reduced the housing total 21 units. Because of the unique nature of the local population (i.e., largely retired with low annual income but with significant fixed assets and personal wealth) future construction needs based upon regional income is considered more reflective of actual need.

Employment

The local economy is based on agriculture, trade and service supporting the retired population, and manufacturing, especially mobile homes and related uses. A major employer in the area is the Hemet Valley Hospital District, which employs 1,000 people. Other major employees include the Hemet Unified School District with approximately 800 employees, and Mt. San Jacinto Jr. College with about 104 employees. The total industrial employment was 1,117 including a mobile home manufacturing plant which employed 400 persons. The following table indicates the categories of employment from the 1980 Census.

Table 17
1980
EMPLOYMENT PROFILE
FOR INDIVIDUALS OVER 15 YEARS OF AGE
RESIDING IN HEMET

	<u>PERCENT</u>	<u>NO. OF PEOPLE</u>
Agriculture/Forestry	2.01%	104
Construction	7.3 %	380
Manufacture	13.5 %	705
Transportation/Communication	6.3 %	328
Wholesale/Retail Trade	27.6 %	1,446
Finance	7.3 %	380
Services	13.1 %	687
Professional Services	18.4 %	960
Public Administration	4.5 %	235
TOTAL	100. %	5,225

Employment projected by SCAG is shown below for the Valley and the County of Riverside:

Table 18
PROJECTED EMPLOYMENT

	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
RSA	14,600	23,000	34,000	45,000	55,000
County	205,400	257,500	336,200	408,900	482,600

SOURCE: SCAG 82 Growth Forecast Policy

HOUSING CONSTRAINTS

Certain factors interplay to form constraints on the ability of the private sector to provide housing. Forces of market, governmental policy and regulations, and location within a larger regional context affect housing availability and affordability. These forces will be discussed in the following sections, including their effects on housing costs and quantity of housing.

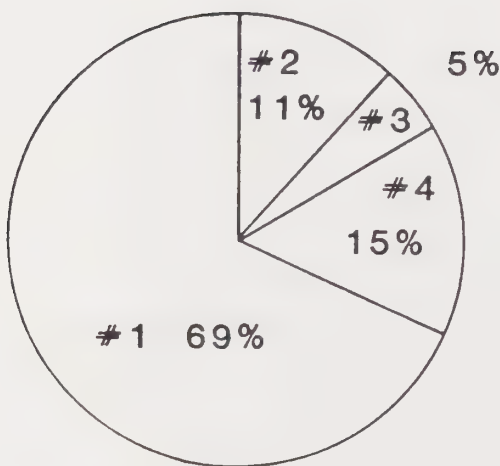
Market Constraints

This section is concerned with constraints on housing that are generated from market forces. These constraints include housing and land costs, construction costs, financing costs, and availability of land suitable for development.

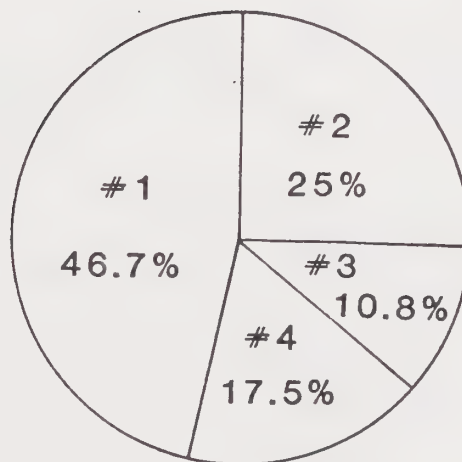
Comparative housing costs for single family dwelling constructed in 1949, 1977 and 1981 reveals that the cost of land, financing, and builder's overhead and profit have become a greater part of the total cost to produce a unit, as illustrated below, although the cost has stabilized over the last few years.

FIGURE 11

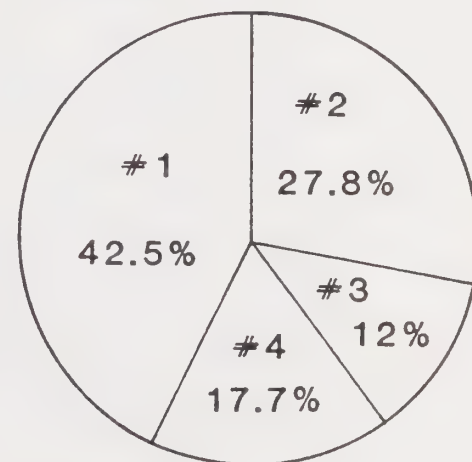
1949



1977



1981



KEY

#1 STRUCTURE(LABOR AND MATERIALS)

#2 LAND

#3 FINANCE

#4 BUILDER'S OVERHEAD AND PROFIT

1 CONSTRUCTION INDUSTRY RESEARCH BOARD

Rising land costs have significantly contributed to housing inflation in the 1970's and 1980's around the country, particularly in California. Financing has become increasingly difficult to obtain as the cost of money rises. These cost increases raise the builder's overhead and are subsequently passed on to the consumer.

As a rule of thumb lenders will loan up to 1/3 of the homeowners income. With a fixed rate loan of \$60,000.00, this would require a \$27,000.00 yearly income. While new lending programs have been developed over the years, the cost of obtaining a loan can be a major impediment to a prospective homeowner. See Appendix A for further details on present loan alternatives.

The availability of mobile home subdivisions and parks significantly reduces the average price of a housing unit in Hemet. Mobile homes provide a major housing alternative for nearly 34 percent of the households. A single-wide mobile home unit cost between \$12,000 and \$20,000 in 1984, depending on the amenities included. Most lots range in price from \$15,000 to \$29,000 within mobile home subdivisions.¹

Since construction costs are less per square foot for a mobile home than a detached dwelling, and the lots are generally smaller for mobile homes, there are a greater number of households that can afford mobile homes than can afford a two or three bedroom home. The life expectancy of a mobile home is 15-25 years, whereas a single family home is expected to have a life expectancy of approximately 30 to 50 years.

Although housing is expensive, Hemet offers lower cost housing than most cities in Southern California. The relatively low cost of land has attracted many developers from Orange, San Diego, and Los Angeles Counties.

Land Availability

Land suitable for future residential development is based on existing land use designations and physical constraints on development. There is a greater amount of developable land for residential development in the County area of the Hemet/San Jacinto Valley surrounding Hemet than in the City itself. The Cities of Hemet and San Jacinto comprise only about 11 percent of the land area within RSA 48. In 1975, only one-fourth of the suitable land in RSA 48 was urbanized. Much of the City's total land is vacant or in agricultural use. The southern and southwest area of the City has nearly 3,000 acres of vacant land with the potential for residential development on approximately 1,200 acres designated for agricultural use by the Hemet General Plan. The majority of this area is in two (2) agricultural preserves. One preserve is scheduled to expire in 1988. It has 500 acres within the City which are designated Residential and Agricultural on the General Plan.

¹ Brubaker and Culton, Real Estate, October, 1984.

Physical Constraints

There are some major environmental or physical constraints to development in Hemet's Sphere of Influence, including flooding, steep slopes, and the Hemet-Ryan Airport.

Flooding is a major concern throughout Hemet, but particularly in south and southwest Hemet. Major runoff from the hills and urban development to the east of the City join at State Street and form Salt Creek. Approximately 90% of the City and 70% of the land within the Hemet Sphere of Influence drains into Salt Creek. Presently the storm drainage system is inadequate to control storm water runoff throughout the City. The City of Hemet, in January, 1984, adopted the Hemet Master Flood Control and Drainage Plan. The Plan identifies necessary flood control facilities and proposes financing methods to complete the project. The Hemet Redevelopment Agency has proposed to spend 44% of the revenue it receives through the increase in assessed land value to complete the projects specified in the Plan, including the channelization of Salt Creek. Developer fees are expected to add to this revenue fund and are currently assessed at \$3,525.00 an acre.

Prior to completion of this Plan, properties will continue to be impacted by flooding. Within the Salt Creek area, severe flooding not only lessens the amount of property available for development but an owner must still retain any incremental increase in storm water runoff on site through the use of retention basins, thereby further reducing the amount of land available for development. The combined affect of these actions is to increase the price of housing.

The eventual installation of Salt Creek and other major channel improvements will eliminate the present flooding hazard. This will eliminate the need for retention basins and open up additional land in the flood plain for development. This action will require the combined efforts of the City (within the City) and the Riverside County Flood Control and Water Conservation District (within the unincorporated County area) to construct the needed facilities, such that an improved channel will exist from Canyon Lake through the City.

The Hemet-Ryan Airport has been the subject of some controversy in the City, primarily due to the City's efforts to protect the airport from conflicts between urban encroachment and aircraft operation. Although the airport does not have commercial operations, the area of aircraft noise impact is somewhat larger than would be expected for an airport of this size and amount of traffic. The majority of the noise is caused by the use of the Hemet-Ryan Field as a "joint attack base" for firebomber activities by the California Division of Forestry and the United States Forest Service. Hemet-Ryan Airport is a major base for aerial firefighting operations in Southern California. The continued availability of Hemet-Ryan Airport as a firebomber and general aviation base is important to the City of Hemet as well as the mountainous areas adjacent to Hemet that depend on the firefighting operations for fire safety purposes.

In July, 1983, the City amended the Land Use and Noise Elements of its General Plan by the adoption of five (5) specific policies developed for the Hemet/Ryan Airport. The document was prepared in conjunction with the Riverside County Airport Land Use Commission, City Planning Commission and County Planning Commission. Its primary purpose is to have a uniform policy document enforced by all affected agencies that address land use in the vicinity of the airport and airport operations. These policies replaced the noise contour lines with specific development criteria. Residential properties within the identified take-off and landing patterns would be prohibited in the City unless development was approved prior to adoption of the policies.

While these policies will minimize the affects of the airport upon residents and enhance public safety, it will reduce the amount of property available for residential development.

Land Costs

Costs associated with the acquisition and improvement of land include the market price of raw land, the costs of holding land throughout the development process, and necessary improvements to the land prior to construction. It is estimated that these costs contribute 25-30 percent to the final sales prices of new homes.

Necessary improvements to land in Hemet are estimated at \$5,000 to \$10,000 per unit for single family dwellings. This cost includes streets, curbs, gutters, lighting, parkway landscaping or other amenities, water and sewage lines, and utility connections to each housing site.

Land holding costs during the development process are estimated at \$800 - \$1,200 per unit ¹ for a 9 to 12 month period. This figure is determined by interest rates on development loans. Interest rates are not amenable to control by local jurisdictions; therefore, the greater inroad that can be made on holding costs would be through shorter processing times for development permits. Processing time has a much larger impact on construction costs than on holding costs, however, due to inflationary effects on construction and labor over time.

One of the major components of total land cost is the prime or raw land. Land prices in the City are low in comparison to other Southern California areas. The City, however, cannot control the market price of its land, which is pushed upward by speculation, demand, dwindling supply, proximity to the mountains and climate.

Left alone, the rapidly escalating market price of land may tend to encourage higher priced development. Higher density zoning could reduce the cost per unit of land, but land with higher allowable densities commands a higher market price. For this reason, density bonuses rather than zoning changes may be the preferred vehicle for reducing land costs.

¹ Brubaker and Culton, Real Estate, October, 1984.

Construction Costs

In 1983, construction and land costs together represented between 65 and 75 percent of the sales price of housing. Average construction costs at the present time are between \$35 and \$40 per square foot depending on the level of amenities and the type of units (single family detached, attached condominiums, duplexes and apartments). ¹

"Bare bones" construction, where a reduction in amenities and quality of materials (above a minimum level of acceptability for health, safety and adequate performance) could result in lower sales prices. Another alternative might be factory built housing.

A major contribution to increasing housing prices is the financing costs of development. For each month that development is delayed, it is estimated that sales price increases approximately 1.1 percent. ¹ Streamlining of permit processing procedures thus may help minimize housing prices.

An additional cost factor is related to the number of units built at the same time. For example, as this number increases, construction costs over the entire development are reduced because of earlier build-out and lower costs for buying or installing in larger quantities. This factor provides an additional benefit when density bonuses are utilized.

Financing Costs

Recent fluctuations in interest rates for conventional construction financing make it difficult to provide any meaningful indication of financing cost trends. However, this trend seems to be somewhat steadily increasing in interest costs. Ultrasystems, in 1979, cited 14 percent annual interest with 30 year repayment periods (fixed rate). This rate is similar to the present rate.

The cost of borrowing money is passed on, typically, to home buyers and renters by developers and landlords. The more the interest rate, the more cost to the consumer. This is usually applied on top of a 10 percent down payment for housing purchases. Government insured loan programs may be available to reduce the down-payment required if certain qualifications by prospective buyers and the property are met. V.A. loans requiring no downpayment may be obtained at 13 1/2 percent interest with a limit of \$110,000 on purchase price. ¹ F.H.A. insured loans may require 5 to 10 percent downpayment at 13 1/2 percent interest with a limit of \$90,000 on the amount of the loan. ¹ These types of financing also require the seller to pay additional money (points) to compensate the lender for lower interest rates. This cost is also passed on to the consumer.

There are other financing programs available that can aid low and moderate income households to obtain adequate housing. Graduated monthly mortgage payments allow a purchaser to make smaller monthly payments during the early years of the loan and larger monthly payments during the later years, when, hopefully, income will have increased.

¹ Brubaker and Culton Real Estate, October, 1984

Governmental Constraints

Local governments affect the supply, distribution, and cost of housing through land use controls, building codes, development permits and processing fees. Compliance with the State-mandated requirements, such as environmental impact assessment procedures, also influence the cost and nature of residential development. In addition, fees and special assessments contribute to government's impact on housing. This section discusses how each of these factors relates to the City's ability to respond to its housing needs.

The City's policies for development are set forth in the General Plan, which contains seven State-mandated elements dealing with the issues of land use, circulation, housing, noise, safety, open space, and conservation. While the issues and policies related to housing are addressed primarily in the Housing Element, policies contained in all of the other elements significantly affect the character and production of housing in Hemet. The relationship of the other general plan elements to the Housing Element is discussed in a later section of this Element.

Local Building Codes

Hemet has adopted the Uniform Building Code, which establishes minimum construction standards for residential development as well as commercial and industrial development. Although a locality may impose more stringent standards than the UBC, it cannot adopt any standards below those established by the UBC. Thus, the City cannot reduce construction costs by revising the City Building Code, as some cities with more stringent standards would be able to do.

Required Off-Site and On-Site Improvements

Developers of single family residential tracts in the City are required to install arterial and local streets, curbs, gutters, sidewalks, sewers, street lighting, and trees in the public right-of-way within and adjacent to a tract. These facilities are, in most cases, dedicated to the City, which is responsible for maintenance. The direct cost of these required off-site improvements in 1984 was estimated at \$70 per square foot¹, which in turn adds approximately \$4,200 to the sales price of each dwelling unit.

While there are no required on-site improvements for lots created by a typical single-family subdivision, some on-site improvements are required for planned residential developments and apartments. For example, private streets and landscaping within a planned development must meet standards set forth in various City codes. All off-site improvements mentioned above are also required for planned developments. Apartment developers are subject to minimum on-site open space and parking requirements as well as off-site improvements.

¹ J. F. Davidson Engineering, October, 1984

Permits

As specific projects are initiated, detailed approvals are required which take the form of permits and inspections. The average application and permit processing times are provided in Table 26.

The skyrocketing cost of housing is often blamed in part on governmental delays and bureaucratic red tape. Unquestionably, stringent development regulations, in many cases, have increased processing time and thus added to housing costs. As previously mentioned, it is estimated that every month a residential project is delayed beyond its planned construction start-up date, the cost per dwelling unit increases at least 1.1 percent of the planned selling price. One potential way to reduce housing costs is to reduce the time necessary for processing of permits. At the present time, it would not appear that significant savings would result from "fast track" processing because these time are relatively short in the City.

The City's permit processing procedures include an environmental impact assessment and subsequent review of an environmental impact report if significant environmental impacts are found to exist. This portion of the processing procedure is mandated by State law under the California Environmental Quality Act.

Taxes and Insurance

Since the passage of Proposition 13, the amount and rate of property taxes and property tax increases have been uniformly regulated throughout the State. The City of Hemet has no special tax. Therefore, the taxes paid and City revenue generated for the sale of a new \$80,000.00 home in the City is equal to a similar priced home in the County.

The City does have lighting and landscaping assessment districts. The district is known as a benefit assessment district designed for a specific purpose. The purpose of the lighting district is to construct and/or illuminate street lights within the City. The present rate for residential areas is \$.56 per linear front foot of property or \$33.60 for an average home per year. The landscaping portion of the district is only applied to large developments that have right-of-way landscaping. The cost of the landscaping depends upon the type of landscaping and its maintenance needs. The maximum rate currently assessed is about \$105.00 per unit.¹

Although both costs referred to above are listed on a homeowner's tax bill and must be paid along with other property taxes, they are not a tax. The revenue collected pays for the actual cost of the service provided.

Regional Relationships

The provision of adequate housing for all economic segments of the community is a regional problem, closely tied to economic expansion and employment growth. Long commute trips in Southern California are common due in part to housing preference and affordability. As indicated in prior sections, housing is less expensive in Riverside County than either Los Angeles or Orange Counties. Therefore, commuting becomes not only acceptable, but affordable to many home owners. Of the 5,106 employed persons over the age of 15, as cited in the 1980 Census, 1,011 (19.8%) commute between 15 and 30 minutes to work and 801 (15.7%) commute 30 minutes or more to work.

¹ City of Hemet Finance Department, October, 1984

A major portion of the growth has been due to individuals desiring an area with a warmer climate, that is quiet and provides jobs (MRI Survey, 1982). In many instances Hemet has become an area which people move to due to the higher price of housing in other areas. Therefore Hemet and Riverside County have become the affordable housing for Orange and Los Angeles Counties.

Fees

Fees are collected by the City to defray the costs of permit processing, inspections, environmental impact determinations, and to contribute to the delivery of services such as water, sewers, storm drains, and parks and recreational facilities. These fees are assessed on the basis of number of dwelling units, acres of development or building square footage. As land use densities increase the proportion of the cost borne by each unit decreases for those fees which are charged on a "per acre" basis. Costs per dwelling unit for fees in Hemet are contained in the following table:

TABLE 19
COST OF FEES AND PERMITS
(AVERAGE FEE PER UNIT)

<u>FEE TYPE</u>	<u>SINGLE-FAMILY DETACHED ²</u>	<u>APARTMENT/ CONDOMINIUM</u>	<u>MOBILE HOME²</u>
Parks	\$ 50.00	\$ 50.00	\$ 50.00
Schools	706.00	706.00	706.00
Sewer	240.00	240.00	240.00
Water	231.00	231.00	231.00
Building Permits	642.00	538.89	94.63 ³
General Plan Fee	66.00	66.00	66.00
Public Works ¹	950.00	185.00	950.00
Fee and Inspection			

¹ Drainage fee assessed at \$3,525 per acre is included in Public Works Fees and Inspections

² Cost per unit as part of a subdivision

³ Utility and set-up cost

SOURCE: Hemet Planning Department, 1984

Employment Residence Balance

According to the 1980 Census, approximately 56 percent of the employed citizens of Hemet work within Hemet. Due to the large number of retired citizens in the City it is assumed:

- 1) That many people commute to the businesses in Hemet, which to a large extent are supported by the retired people, and;
- 2) Due to the large number of age restricted housing projects (restricted by owner/developer or City) it is not possible for younger individuals of working age to find housing.

The City's attempt to promote economic development and provide a variety of housing types to off-set this situation has been discussed in previous sections.

TABLE 20
PROCESSING TIME AND FEES

APPLICATION	PROCESSING TIME IN WEEKS	APPLICATION FEE
Lot Line Adjustment	1 - 2	\$125.00
Determination of Use	1 - 2	0.00
Site Review	1 - 3	45.00
Tentative Parcel Map	4 - 6	425.00
Final Parcel Map*	1	75.00 + \$2.00 per lot
Tentative Tract Map	4 - 6	425.00
Final Tract Map*	1	75.00 + 2.00 per lot
Zone Change - regular*	7 - 9	394.00
Planned Unit Development*	7 - 9	200.00 + 10/acre (1-199 ac) 5/acre (200 + ac)
Planned Community Development*	7 - 9	550.00
General Plan Amendment*	7 - 9	462.00
Conditional Use Permit	4 - 6	462.00
Variance	4 - 6	425.00

* - Requires City Council approval

EXISTING HOUSING PROGRAMS

The Riverside County Housing Authority and Riverside Community Development Department presently administer housing programs in both incorporated and unincorporated areas of Hemet/San Jacinto Valley. The primary focus of housing efforts have been on housing rehabilitation. Some of the programs operated by the Housing Authority several years ago have been phased out, but their general goals have been continued under the Housing Improvement Program operated by the Community Development Department. The Deferred Payment Loan Program (DPLP), grant program and HUD Section 312 Loan Program have been discontinued. The 312 Loan Program may be re-established in the future due to pay back revenues it has recently been receiving from prior loan recipients.

The elimination of these programs is due in part to the new emphasis on housing and economic development programs and that each program be self sufficient. The eliminated programs were not loan programs and did not provide for a pay back of funds. The programs which remain are discussed later in this section.

In March, 1983, the City of Hemet executed an Agreement with the County Housing Authority to permit them to operate the following programs within the City; Housing Improvement Program, Senior Home Repair, Weatherization and, 312 Rehabilitation Loan Program (if operational). Should a Valley resident desire housing assistance, he/she should contact the Housing Authority or Home Improvement Program Staff in Riverside. There is no local office for the Hemet area.

The prior Housing Element indicated housing officials had expressed frustration over the dollar amount limitation set by HUD for the Hemet area. Often major rehabilitation costs exceeded the amounts available through loan programs. Another concern expressed then by "local housing official" is the ability of applicants to qualify for loans. They found that some of the low income applicants are considered to be credit risks by conventional lending institution policies and are thus ineligible for loans. The report identified that 75% of loan applicants were ineligible. A recent conversation with a County Official indicated this situation was no longer true. Of the 68 applications received, only 12 (17.6%) were turned down by the bank. Once approved all but one of the over 600 loan recipients had defaulted over the last five (5) years.

Listed below are the dollar amounts for rehabilitation loans within the City of Hemet and those in the unincorporated County area from 1978 through 1983:

<u>YEAR</u>	<u>HEMET</u>	<u>UNINCORPORATED</u>	<u>TOTAL</u>
1978	\$ 2,000	\$ 10,800	\$ 12,800
1979	35,080	8,100	43,180
1980	2,500	25,000	27,500
1981	32,000	33,000	65,000
1982	14,600	76,915	91,515
1983	8,458	705,315	793,773

Existing Programs

Below Market Interest Rate Loan (BMIR) (7 1/2%)

The purpose of the BMIR loan is to pay the costs of rehabilitation, not to exceed \$15,000.00. This program is available to owner occupied housing units for which income does not exceed 80% of median income (\$25,100 as of 3/1/83)- This is a 15-year program with loans made by Crocker National Bank. The interest to the borrower is reduced by the participation of the bank and the County to equally support the loan amount.

Grant Programs

This program provides a grant of up to \$2,000 for materials and labor to low income elderly, handicapped, disabled, and very low income homeowners to make improvements on their homes. It applies only to homeowners who are occupying their dwellings.

HUD Section 312 Loan Program

The Department of Housing and Urban Development Section 312 Loan Program provides low interest, 3% loans of up to \$27,000 per dwelling unit, for low and moderate income homeowners. These loans are made directly by the Department of Housing and Urban Development utilizing funds approved by Congress expressly for the Section 312 Loan Program.

Section 8 Rental Assistance Program

Section 8 rental assistance is another program the County Housing Authority offers in the Hemet area. Under HUD's existing program, contracts are made with a Housing Authority to administer funds. A family's eligibility is determined by the Housing Authority Staff and a certificate of "family participation" is issued based on the eligibility criteria. The family may continue to reside in their present dwelling or they may find a new home in the area. Once the home is found, the "housing assistance payment contract" is entered into between the owner and the Housing Authority. The payment made to the owner is the difference between what the tenants pay and the "fair market rent" which is established by HUD for the area. The maximum term for Section 8 assistance is a 1-3 year lease. Activity in the Valley area over the last eight years has provided 186 contracts. Active contracts are as follows:

City of Hemet*

88 contracts (active contracts for families now receiving assistance)

27 elderly or disabled	1 bedroom units
8 family	1 bedroom units
35 family	2 bedroom units
16 family	3 bedroom units
2 family	4 bedroom units

12 active certificates for eligible families not yet receiving assistance

* Does not include applications for 68 unit apartment complex financed by California Housing Finance Agency, west of Lyon, south of Whittier.

Unincorporated County Area - Hemet/San Jacinto Valley

1 active contract
5 certificates

Registration for Section 8 Rental Assistance is now open and the number of families receiving assistance is expected to rise significantly over the next few years.

Article 34 Referendum

The City of Hemet approved an Article 34 referendum in November, 1978, authorizing low income rentals totaling up to 5% of the City's existing housing stock. As of the April 1980, Census, this would allow approximately 638 units. To date, no assisted housing has been constructed within the City limits.

Section 8 Moderate Rehabilitation Existing Housing

This program is designed to preserve existing rental housing stock. A landlord may receive up to 120% of the Section 8 existing housing fair market rents to cover the costs of rehabilitating substandard units and placing them on the Section 8 program for 15 years. The County currently has 12 active moderate rehabilitation contracts; 11, one (1) bedroom elderly units and 1, one (1) bedroom family unit.

Senior Home Improvement Program

Although the City did not formally execute a contract permitting the operation of the Senior Home Improvement Program until 1983, the County has operated the program in the City since 1982. During 1982 and 1983, 32 jobs were undertaken. The amount of cost was minimal primarily weatherizing the home. The average cost of a job, County-wide is only \$22.00.

Density Bonus

State law requires that when a developer provides 25 percent of the housing units within a development for low and moderate income families, the City must either grant a density bonus or at least two other bonus incentives, such as waiver of park fees, construction of public improvements, use of federal or state monies or exemption from other local ordinance requirements.

RELATED PROCEDURES AND DOCUMENTSPeriodic Revision of the Housing Element

Pursuant to Section 65588 of the California Government Code, this Housing Element shall be reviewed as frequently as appropriate to evaluate the following:

1. The appropriateness of the housing goals, objectives, and policies in contributing to the attainment of the State housing goal.
2. The effectiveness of the Housing Element in attainment of the City's housing goals and objectives.
3. The progress of the City in implementation of the Housing Element.

The Housing Element shall be revised as appropriate, but not less than every five years with the first revision in three years in accordance with AB 2853 to reflect the results of the periodic review. Pursuant to AB 2853, this Housing Element is required to be revised again by July 1, 1989.

Relationship to Other General Plan Elements

The California Government Code requires that General Plans contain an integrated, internally consistent set of policies. When any one element of the General Plan is revised, and when new policies and priorities are adopted, the other elements must be reviewed to ensure that internal consistency is maintained.

Since 1968, residents of the Hemet/San Jacinto Valley have relied on the Hemet-San Jacinto Area General Plan for guidance. The present Land Use and Circulation Elements of the General Plan of the City of Hemet are contained in that Plan. The Land Use Plan had a planning period to 1980, and did not consider many of the environmental, social, fiscal and spatial aspects which affect land use decisions today. Since then, several additional elements of the General Plan have been adopted as listed below:

- 1973 Conservation and Open Space Element
- 1975 Noise Element
- 1975 Housing Element
- 1976 Seismic Safety and Public Safety Element.

The current General Plan consists of the following elements:

1. Land Use

The Housing Element is most affected by development policies contained in the Land Use Element, which establishes the location, type, intensity, and distribution of land uses throughout the City. In designating the total acreage and density of residential development, the Land Use Element places an upper limit on the number and types of housing units to be constructed within the City. The acreage designated for industrial, commercial, and office professional use creates employment and services opportunities, and the presence of these jobs and available services affects the demand for housing in the City. On-going evaluation of the impacts associated with various land use types and proposed developments may warrant a reconsideration of the distribution of land uses throughout the City and its environs.

2. Circulation

The Circulation Element calls for the development of an integrated system of streets and other circulation facilities to carry the flow of traffic generated by various land uses, including residential uses. At the same time, the Element seeks to minimize adverse environmental and aesthetic effects of the road network and traffic on sensitive land uses such as residential areas. By providing for a convenient public transportation system and a network of bicycle, pedestrian and equestrian trails. The Circulation Element attempts to create a satisfying living environment for residents of Hemet.

3. Open Space and Conservation

This Element also contains the City's Parks and Recreation Elements. Policies contained in the Open Space and Conservation Element call for the preservation and protection of the City's natural environment through the conservation of significant open space areas, acquisition of land for recreation and parks, and restricted development of hazardous areas and areas utilized for the production of natural resources.

4. Noise

The Noise Element contains policies aimed at reducing the impacts of urban noise on residents and employees within the City. Sources of noise include highway and arterial traffic, construction, and aircraft. The housing environment is affected by noise and, as such, the Housing Element policies are consistent with the policies within the Noise Element.

5. Seismic and Public Safety

The Seismic and Public Safety Element identifies geologic and flood hazards in the City. Although development within identified hazards areas is not prohibited altogether, special construction techniques are required to ensure that structures will remain safe in the event of a disaster. Unstable soil conditions in certain areas of the City require additional grading, fill, and compaction before development is allowed. In addition to the extensive fault system that underlies the Hemet/San Jacinto Valley, most of the City is located within the Salt Creek Flood Plain boundaries. The City has recently adopted an Element to address flooding.

6. Scenic Highways

This Element is perhaps most strongly related to the Open Space and Conservation Element because of the proposed program of scenic routes which will help initiate some of the goals and policies contained in that Element. These goals and policies include references to scenic and historical preservation, visual relief, protection of community identity, and the utilization of proper design criteria to preserve the unique and special resources in the City. The Element is also closely related to the Circulation Element.

7. Master Flood Control and Drainage Plan

This Element identifies flood areas of the City and specifies the location and size of drainage facilities necessary to alleviate this problem. The majority of the southwest area which is designated for residential development is within the flood plain. Implementation and completion of this plan will provide for the development of residential areas consistent with the General Plan to meet the projected housing demand of the area.

A P P E N D I C E S

LOAN COSTS

INDEPENDENT BANK

HOME PRICE	LOAN AMOUNT	INTEREST RATE	MONTHLY PAYMENT	TOTAL COST
\$ 62,500	\$ 50,000.	14% plus 2 points	35 @ \$ 543.40 1 @ 50,128.40	\$ 70,911.25
81,250	65,000.	Plus \$200.00	35 @ 771.96 1 @ 65,166.62	92,185.22
100,000	80,000.	Plus \$200.00	35 @ 950.11 1 @ 80,204.84	113,458.69

CONDITIONS OF LOAN:

1. Loan provided at 80% of home value
2. Balloon payment at end of three years
3. 20 percent down
4. Points and \$200.00 due upon first payment.

INDEPENDENT BANK

HOME PRICE	LOAN AMOUNT	INTEREST RATE	MONTHLY PAYMENT	TOTAL COST
\$ 62,500	\$ 50,000	14%	59 @ \$ 622.77 1 @ 47,292.77	\$ 83,990.77
81,250	65,000	14%	59 @ 808.00 1 @ 61,480.00	109,152.00
100,000	80,000	14%	59 @ 991.21 1 @ 75,667.59	134,148.98

CONDITIONS OF LOAN:

1. Loans provided at 80% of home value
2. Balloon payment at end of five years
3. 20 percent down

COMMERCIAL BANK

HOME PRICE	LOAN AMOUNT	INTEREST RATE	MONTHLY PAYMENT	TOTAL COST
\$50,000	\$40,000	12.75% plus 2 points	354 @ \$435.60	\$154,202.40
65,000	52,000	plus \$50.00	354 @ 566.28	200,463.12
80,000	64,000	plus \$50.00	354 @ 696.96	246,723.84

CONDITIONS OF LOAN:

1. Fixed rate loan for 29 years
2. 20 percent down
3. Points and \$200.00 due upon first payment.

VARIABLE LOAN - COMMERCIAL BANK

<u>INTEREST</u>	<u>DURATION</u>	<u>LOAN TO VALUE RATIO</u>
10.75	29 1/2 YEARS	95%

NOTE: Monthly payments and costs cannot be calculated due to the variety of loans possible.

CONDITIONS OF LOAN

1. Cap of 5% after first adjustment
2. First adjustment of 250 points (2.5%) over Federal Home Loan Bank Board Index (Commences with 7th payment)
3. Annual adjustment after 1st adjustment

LAND USE ELEMENT

CITY OF HEMET

ADOPTED - June 22, 1982

REVISED, MARCH 22, 1983

- RESOLUTION NO. 2166, LAND USE DENSITY AND MATRIX

REVISED, JULY 26, 1983

- RESOLUTION NO. 2205, ADDITION OF AIRPORT POSITION PAPER

REVISED, MARCH 26, 1985

- RESOLUTION NO. 2361, ADDITION OF SPECIFIC PLAN PROCESSING

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INTRODUCTION

Intent and purpose

The land use element of the Hemet General Plan is intended to update the policies established in the Hemet-San Jacinto Area General Plan, adopted in 1968, with respect to the land uses in the Hemet planning area. This element is one of the nine mandated general plan elements under California Government Code Section 65302(a).

The purpose of the land use element is to present a desired pattern for the future spatial development of the planning area, and to establish guidelines for the translation of the overall land use policy into specific land use proposals. In many respects the land use plan serves as the culmination of the entire general plan, since this element sets forth the spatial distribution of urban uses, drawing upon data generated in the accompanying general plan elements. It is hoped that this element can assist Hemet's decision makers in rendering land use decisions that will lead to improved long-term development of the planning area.

Relationship to other general plan elements

Each general plan element is intended to provide planning guidelines in one aspect of the broader quality of life questions that planning addresses. The land use element plays a central role in the overall general plan for two reasons. First, the distribution and intensity of land uses influence the planning factors addressed in each of the other elements. Second, municipal authorities, through their zoning power, have the authority to determine the ultimate land use mix and density. Land use regulation is thus a regulatory measure for the implementation of many recommendations in the nine elements.

The specific relation of the land use element to the other eight mandated elements is as follows:

Housing. The housing element is concerned with the provision of adequate housing of acceptable quality for all citizens of the city. The land use element makes recommendations for the location, distribution and density of projected housing needs, linking this projected need with environmental elements such as noise levels and open space, and with infrastructure elements such as circulation, to assure adequate carrying capacity of certain services for the growing city.

Noise. The noise element identifies the current level of noise exposure within the planning area and forecasts future noise levels. It then makes planning recommendations for noise abatement. The proposed land use distribution presented in the land use element draws from recommendations in the noise element, and proposes a land use distribution that avoids noisist compatibility conflicts in adjacent land uses. Such avoidance is particularly important in a growing city, where present land uses on what is now the urban fringe may be overtaken by other land uses which are more sensitive to noise problems as the city expands outward.

Circulation. Since the city's street network serves as the link between traffic generators such as residences, employment, shopping, and recreation, land use and street planning must be coordinated to assure adequate capacity of streets and intersections. Traffic safety, convenience of access, available parking, and traffic-generated noise all influence, and are in turn influenced by, land uses in the city.

Conservation and open space. Public open sapce, parks and agriculture are significant land uses within the planning area. Once overtaken by urban development, such areas usually remain in urban development and seldom revert back to their original use. Thus, in the context of a city plan, these resources are practically unrenewable. The land use element must address the issue of open spaces that are to be preserved in its consideration of lands for future urban development. In addition, land uses adjacent to natural areas can affect the conservation of these areas through various spillover effects that can be addressed only within the purview of an overall plan for the ctity.

Seismic and public safety. Geological fault zones are one of the primary determinants to acceptable land uses in adjacent areas. Land use planning is also a useful tool for addressing certain aspects of fire safety, particularly regarding the potential for conflagration in densely developed areas, or areas adjacent to heavy fire load land uses such as brushland or certain industries.

Scenic highway. The entire length of Highway 74, which passes directly through Hemet as Florida Avenue, is listed as eligible for official State scenic highway designation. Although the land use element does not directly address the aesthetic character of land uses, which would be of direct significance to the scenic highway element, the potential aesthetic quality of Highway 74 should influence land use decisions in its vicinity.

The land use element embodies many of the findings of the other eight elements, but it does not contain all the

details necessary for a full understanding of the intended implications of the plan as a whole. A working knowledge of of all nine elements is essential for a complete understanding of the land use element.

Amending the land use element

This land use element is a general guideline for the future development of Hemet, and is based on current conditions, future trends, and present community values, as indicated below under "Inputs." The trends and values upon which this study is based may well change over time, however, and these changes may call for general plan revisions. An attempt has therefore been made to prepare this plan as a flexible document which provides general guidelines. Specific land use decisions regarding exact density, zoning, and site planning remain in the hands of the City of Hemet.

Should future trends necessitate adjustments to this general plan once it is adopted, the consultants recommend that two policies be followed:

1. The effectiveness of the general plan should be monitored on a continuing basis, and should be thoroughly reevaluated every five years.
2. The general plan and the land use element should be amended only with great care. Amendments should be made only when the proposed amendment will not adversely affect the implementation of any other policy contained in the general plan, and when it will support more desirable land use patterns in the public interest.

The land use setting of Hemet

The jurisdiction of Hemet contains a population of about 25,000 in 1982, though most of this population is concentrated on about thirty percent of the land. Growth has occurred in particular to the south and east of downtown, and has extended onto lands beyond the city limits. The southwest area of Hemet remains comparatively rural, containing 3,200 acres of land. This land amounts to nearly fifty percent of the total acreage of the city and seventy percent of its undeveloped area. These southwest lands are of special concern in this plan, as are the lands to the northwest, which are currently developed primarily as small horse ranches but are under development pressure. The future of the old central business district is also of special concern.

Hemet lies in the eastern part of the San Jacinto Valley, surrounded by towering mountains and rolling hills. The San Jacinto Mountains rise to the north and east; the Santa Rosa Hills and the Domenigoni Mountains to the south, and the Lakeview Mountains form its western boundary. The southwest part of the city actually extends to the foothills of the Domenigoni Mountains, among the steepest surrounding the valley. Thus the city is situated in an area of unusual scenic beauty, which is an asset that should be carefully nurtured in future planning decisions for the city. This unique asset underlies much of the fundamental concern of this plan.

At one time Hemet was a center for agricultural production. During the 1980s, the city began a transformation from a commercial center serving the agricultural population of the San Jacinto Valley to a rapidly growing retirement-oriented community. The retirement population has been drawn to Hemet because of its beauty, its clean air, and its warm climate, where the annual average temperature is 62 degrees.

To the majority of Hemet's citizenry, the advantage of the city is certainly its ambiance of relaxation and convenience; but the rapid growth of the planning area has put strains on its agricultural town infrastructure. Mobile home parks designed for a retired population have been developed in the western part of the city and beyond the city limits to the west and north, thereby establishing large areas of relatively high population density. In certain areas, commercial development has followed this burgeoning residential development, but often the street system and intersection design is not warranted to handle new traffic volumes. Leapfrog development has placed strains on city services, and new development on the fringes has led to a reallocation of urban resources away from the older neighborhoods in the city center. These neighborhoods, with their mature street trees and varied architectural styles, have high potential amenity levels.

In addition, proposed developments of large tracts of land in the southwest area, Diamond Valley, and potential urbanization of the I-15 corridor, all present challenges to the city in continuing its policy of attracting new growth while maintaining the area's enviable quality of life.

The economic setting of Hemet

In this plan, land use is perceived as the space-specific, physical manifestation of economic activity. In other words, land use is seen here as a reflection of the kind of economy that characterizes a city. Cities with different economic bases will tend to have significant differences in physical form.

In applying this notion to Hemet, it is important to note that the city acts as a market center for an extended area. Thus the city has some substantial advantages over other cities of roughly the same size which are suburbs of larger cities, as would be the case if Hemet were located closer to Los Angeles or Riverside. In essence, Hemet has more basic activities, those which bring outside money into a community, than do most suburbs of similar size. This role as a market center acts to strengthen the city's internal economy.

Because it serves as a market center to a large area, Hemet supports a relatively wide variety and number of business activities. Thus, the city has not only the expected businesses such as banks and supermarkets. The large number of people in its hinterland makes possible the prospering of many types of businesses in Hemet. The large choice of places to shop or conduct other types of business is attractive to the public, and itself acts as a further inducement to people in the city's hinterland to do business in Hemet. In other words, the wide choice of places and firms acts to strengthen the city's function as a market center.

The net result of this economic position is an unusually extensive area in Hemet devoted to commercial land uses. The whole length of Florida Avenue is lined with a great variety of stores and services. San Jacinto Street and several other streets in the central business district, along with newer commercial streets in outlying districts--such as Stetson--also exhibit this characteristic. Thus, Hemet's land use pattern, with its large role for commercial uses, is an expression of the extensive demand for such activities found in a city which acts to such an extent as a market center.

Although to draw precise boundaries to the Hemet economic hinterland is beyond the scope of the present study, a general idea of its size can be given. To the east, this area would include such settlements as Idyllwild, Anza, and Garner Valley. To the south, the hinterland appears to include Aguanga, Sun City, Sage and Winchester, though

Rancho California appears to be beyond the hinterland border. To the west, Romoland and Homeland are within the city's influence, and to the north the area would include San Jacinto, Lakeview and Gilman Hot Springs. All these places, then, plus the rural population residing between them, contribute to the economic support of Hemet and to the variety of activities found here.

Today, Hemet is a city in transition, vacillating between its former existence as an agricultural town, a picturesque village, a popular haven for retirees, and a regional market center. This general plan revision was prepared to serve as a guide through these conflicting trends.

II
INPUTS , ASSUMPTIONS
AND CONSTRAINTS

INPUTS, ASSUMPTIONS AND CONSTRAINTS

Land use plan inputs

The actual physical land use plan for Hemet is presented in the land use planning map accompanying this report. The commentary contained herein is intended to describe the bases upon which the mapped land use recommendations were made.

Several factors served as principal inputs for the land use element:

1. The Hemet-San Jacinto Area General Plan of 1968. This plan established the general patterns for future growth in the area. This 1968 plan thus serves as the starting point for the present revision to the Hemet land use plan.

2. Amendments to the 1968 general plan. Since the adoption of the 1968 plan, several amendments to the land use plan map have been adopted by the Hemet City Council. These amendments supercede the original plan and are used as a basis for the present revision.

3. Existing zoning boundaries. From time to time, the general plan of the city has been amended in a de facto manner through the adoption of zoning district amendments that were not fully anticipated by the 1968 plan. The present zoning configuration has, therefore, been taken as a factor in determining future land use proposals in such cases.

4. Existing land use. In certain cases, the existing land use on a site was taken as the determinant for planned future land use. This factor was used only when the buildings on the site are in good repair and compatible with surrounding land uses.

5. Economic functions and needs. The unique position of Hemet as a market center dominated by a service economy, combined with the special demands placed on it by the retirement community, suggest the development of land use criteria that may differ from other cities of similar size.

6. Land parcel boundaries. The existing distribution of land parcels provides certain constraints to the assembly of large parcels for development, or to the change in the configuration of parcel boundaries. In some cases, this existing configuration was deemed a substantial enough factor to influence proposed land uses in an area.

7. Existing zoning district boundaries. When other factors did not apply, existing zoning boundaries were considered to be a determinant of recommended future land use, since the existence of a zoning district can influence development intentions not only on the site but adjacent to it.

8. Neighborhood integrity. The protection of estimated physical boundaries of neighborhoods in the city was deemed an important enough factor to guide the land use plan.

9. Circulation. Future land use policy is based, in some areas, on the existing street configuration and carrying capacity.

10. Specific plans. The land use recommendations of the Hemet Ryan Airport plan, adopted by the Riverside County Board of Supervisors in 1980, has been taken as the authority in the airport district.

Assumptions underlying the land use plan

The consultants have based their land use planning recommendations on several assumptions. These relate to certain existing conditions in the Hemet planning area which will strongly influence future growth patterns, and which reflect the position of the city's elected officials regarding a desirable growth pattern. These assumptions are of two types: economic and administrative.

Economic assumptions. Hemet serves and will continue to serve as a market center for the region, providing wholesale, retail, and service and public administrative functions for a largely retired population in an area extending from Anza to Idyllwild. For this reason, certain standard planning criteria such as the amount of commercial zoning appropriate for a given population, do not reflect the need in Hemet.

The prosperous retail sector of Hemet is suggested by the July 1981 community economic profile for the city, published by the Riverside County Department of Development:

	1980 Population	1980 Taxable Sales (000)	Taxable Sales per Capita
Riverside County	663,923	\$3,274,017	\$4,930
Hemet	23,211	148,251	6,430

Retail sales per capita in Hemet are about thirty percent greater than retail sales per capita in Riverside County as a whole.

The boundaries of this market area have not been precisely defined, and it is recommended that the City of Hemet undertake an economic survey to establish the boundaries of its market area so that future needs may be more precisely determined.

Since Hemet serves as a market center, it also has developed a profile as an employment center. Private industry is dominated by mobile home and recreational vehicle assembly facilities, with the six largest manufacturing firms in the Hemet-San Jacinto area employing slightly more than 1,100 persons according to the Riverside County's economic profile for Hemet. The large quaternary sector, comprised of public utilities and government employees, is an essential source of employment as well; the Hemet Valley Hospital District and Hemet Unified School District alone employ nearly 1,600 persons. More detail on the economic profile of the city may be found below under "Trends and Patterns."

Public Administrative Assumptions.

1. The city planning function will be carried out in a governmental setting made up of numerous overlapping jurisdictions, each having the authority for land use decisions beyond the purview of the City of Hemet, and thus beyond the purview of this plan. Nevertheless, the authority exercised by the agencies listed below, among others, affects land uses in the planning area and thus serves as part of the conceptual foundations of the present plan:

County of Riverside
City of San Jacinto
Local Areas Formation Commission
Eastern Municipal Water District
Lake Hemet Municipal Water District
Hemet Unified School District
County of Riverside Airport Land Use Commission
State Division of Forestry
California Department of Transportation

2. This land use plan provides for the future growth of the Hemet planning area, but it is not construed to be a growth management plan since no specific time lines have been established herein for this growth pattern. This plan assumes the growth-supportive posture of the City of

Hemet and delineates the optimum spatial pattern for this growth, given the governing constraints.

This plan is a land use policy plan, since it sets forth standards under which future development is to take place. It is not, however, a policy procedural plan, as proposed by the County of Riverside for the entire county, or as proposed by the Ultrasystems planning firm for the City of Hemet. In the present plan, spatial guidelines, in the form of the land use planning map, take on a role of equal importance to the policy guidelines set forth in this report.

As a guide to anticipated land use needs, the Ultrasystems general plan proposal of 1979 presented estimated demands for various land uses. These estimates are summarized here for reference in future decisions:

Commercial. At the time the Hemet-San Jacinto Area General Plan was proposed in 1966, approximately 225 acres of land were used for commercial purposes in the San Jacinto Valley, serving a population of approximately 30,000. The commercial land amounted to 7.5 acres per 1,000 population. In Hemet in 1978 there were approximately 200 acres of land devoted to commercial uses and a population of 20,000. The ratio was then 10 acres of commercial per 1,000 population. Development of the Hemet Mall and subsequent construction along Florida Avenue added 40 acres of commercial uses by 1980.

The city of Hemet and the San Jacinto Valley have a higher ratio of commercial uses per thousand population than is the norm for cities of its size. Assuming that this trend is to continue, and using a planning standard of 8 commercial acres per 1,000 population, approximately 700 acres of commercial land would be required to serve a projected population of 88,500 in the valley for the year 2000. If Hemet captured 60 percent of this commercial land, 420 acres of commercial would be required in Hemet, or approximately 200 more acres than is presently developed, by the year 2000.

Retail commercial. In a 1977 survey of regional retail commercial in Hemet, conducted by Stubblefield Associates for the Hemet Mall, the building area of retail commercial development at that time was 537,200 square feet. This retail commercial included general merchandise, apparel, home furnishings and specialty items. The Hemet Mall added an additional 144,000 square feet--the one development increasing the total floor space by

over 25%, bringing the total to 681,200 square feet of regional retail in the valley. Hemet retail sales total 64.3 percent of the retail sales in the valley. The city's percentage of sales in all of Riverside County has been increasing from 4.8 percent to 5.4 percent.

Industrial. Approximately 74 acres are devoted to industrial uses within the city limits of Hemet, or 3.7 acres per 1,000 population. A 1978 survey of building square footage and employees in Riverside County indicated that there were 623,150 square feet of industrial buildings and 1,117 employees in Hemet. This figure translates into 15 employees per acre and a building-to-site ratio of 1:5 in industrial uses.

Although the amount of land utilized for industrial activities has actually decreased in Hemet since the 1968 Hemet-San Jacinto Area General Plan, future industrial development around the Hemet Ryan Airport may be anticipated.

Trends and Patterns

This plan, in addition to being based on a number of assumptions, also notes several trends and patterns in the present configuration of Hemet.

Existing land use distribution.

Commercial. As in many small cities, major commercial areas of the city of Hemet have developed along Florida Avenue, the major State highway. This trend of concentration of commerce along Florida is apparent both within the city limits and beyond them, in the county. Although commercial uses have been developing along other major streets in the city, such as Stetson and San Jacinto, Florida continues to be the major commercial corridor. The old central business district of the city is situated along Florida Avenue between State Street and Buena Vista Street. The Hemet Mall is on Florida Avenue at Kirby, to the west of the CBD.

Industrial. There are three locations for industrial uses in Hemet, each of them adjacent to the Santa Fe railroad tracks. One location is in the north toward the city of San Jacinto along State Street, another is south of Florida near Palm Avenue, and the third is near the Hemet Ryan Airport. Beyond the city limits, industrial development is scattered in several locations, including the area between San Jacinto and Hemet, by Hemet Ryan Airport north of the San Jacinto River, and southeast of the city of Hemet.

Residential. Much of the residential development in Hemet and the San Jacinto Valley caters to the retirement population. A considerable number of residential areas in the planning area are devoted to mobile or manufactured homes. Of the city's total residential acreage in use in 1979, 36 percent was used for mobile homes, 51 percent for single family residential, and 13 percent for multi-family residential. The percentage of residential acreage and for mobile homes has increased considerably over the last decade and a half, from 13 percent in 1966 to 36 percent in 1978. Mobile homes are generally located in the western portion of the city, with single family homes concentrated in the southeast sector. A large concentration of lower density multi-family development, primarily duplexes, is located in the northwestern portion of the city, and higher density residential is scattered in older residential areas near Florida Avenue in the central business district.

Agriculture. Agricultural uses are primarily found in the southwest part of the planning area, although some isolated agricultural uses are found within the existing developed portion of the city, in the Park Hill district, and toward the northwest.

Public facilities. The city has three parks within its limits, all situated on Florida Avenue, plus numerous private recreational facilities located within residential subdivisions. These tend to operate as neighborhood parks as well as provide regional golf recreation. Four elementary schools and one junior high school are located in the city; students attend high school in the unincorporated southeastern portion of the San Jacinto Valley.

The city's civic center, a community center and a fire station are situated in downtown Hemet north of Florida Avenue. The hospital is on San Jacinto Street north of downtown Hemet. Riverside county owns two blocks along Florida Avenue between the Hemet Mall and downtown, which are used for the Farmers Fair. The county also has administration facilities in the northern portion of the city along State Street. The school district has its offices in the western part of the city on Latham Avenue.

Table 1 lists the approximate acreages of each land use in Hemet as of 1979. The city has a higher percentage of commercial land than the typical city, and a lower amount of industrial and public lands.

Table 2 shows the comparative acres devoted to various land uses in 1966 and 1978. During this period, several trends

Table 1: Acreages of existing land uses in the city of Hemet

	Dwelling Unit Categories					Total	% Total	% of Urbanized Areas
	2 du/ac	3-7 du/ac	8-18 du/ac	19-40 du/ac	Sub Total			
Residential								
Single Family	22	933	26	0	981	17		
Multi-Family	0	24	210	15	249	4		
Mobile Homes					688	12		
						1,918	33	72.4
Commercial						204	3	7.7
Industrial						74	1	2.8
Public, Quasi-Public						182	3	6.9
Non-Agricultural						428	7	
Vacant								
Agricultural						2,827	48	
Circulation (major arterials only)						273	5	10.2
TOTAL						5,906	100	100

Source: Ultrasystems, Gruen Assoc., 1978

Table 2: Comparison of land uses, 1966 and 1978

Land use type	1966 ¹		1978 ²	
	Acres	%	Acres	%
Single family	435	15	981	17
Duplex and multi-family	60	2	249	4
Mobile home park	71	2	688	12
Total residential	567	19	1918	33
Agricultural	560	22	2827	48
Industrial	88	2	74	1
Public, Quasi-public	168	6	182 ³	3
Streets	474	16	273	5 ⁴
Vacant	910	31	428	7
Commercial	78	3	204	3
Mountain	59	2	-	-
Total	2904	100%	5906	100%

- Notes:
1. From the Hemet-San Jacinto Area General Plan
 2. From Ultrasystems and Gruen Associates
 3. Does not include Simpson Park
 4. Includes major and secondary streets only

became apparent:

- The percentage of vacant land decreased by more than 75 percent.
- The percentage of agricultural land more than doubled.
- The percentage of industrial uses decreased, but the total area has remained quite limited.
- The percentage of land devoted to mobile home development has increased almost six times.
- The percentage of developed land devoted to commercial uses has remained fairly constant.
- The percentage of land devoted to non-mobile home residential has increased slightly.
- The percentage of public and quasi-public uses decreased by about half.

In general, this trend shows a more intense urban development occurring over the last fifteen years, particularly in the mobile home residential sector.

Demographic trends. A reliable population projection for Hemet is difficult to establish because of the high immigration rate coupled with the relatively short tenancy period of some residents. In addition, it is difficult at this time to calibrate the interconnected effects of the potential development along the I-15 highway corridor, with particular reference to the effect on Hemet of development in the Sun City area. The Housing element of this plan discusses projected population based on a simple 8% annual growth rate. A more detailed projection still awaits forthcoming data from the 1980 census.

It should be cautioned that demographic figures, when available, will require some different interpretations in Hemet than in most cities in its population range. The large retirement community can be expected to have differing consumer demands and require fewer employment opportunities than would the population of many other cities. Thus the population of the planning area itself may require less land allocated for commercial and employment functions, but the role of Hemet as a regional market center may compensate for this skewed need. Again, an accurate assessment awaits more complete 1980 census information.

Development trends. During 1981, commercial development in Hemet substantially outpaced residential

development, perhaps influenced by high interest that put a special damper on the residential market. This construction is believed by some developers to precede demand, and the City of Hemet has taken the position that private land use decisions, rather than the planning function, should determine which land is available for development.

The City of Hemet should be cautious, however, about allowing over-building of commercial property. This recommendation is based on three factors. First, vacant or underutilized commercial buildings can place an added burden on public safety services (such as police and fire), while producing few revenues to support these services. Second, large commercial square footage that becomes available to tenants at below-market rates because of overbuilding can attract marginal uses that may suffer from instability and may not necessarily address the needs of the community. Third, given the City's interest in promoting growth, we suggest that the image of a prosperous city--including quality commercial tenants--is often important in helping realize a city that is prosperous in fact. It has been learned that a de jure no-growth policy can be an effective de facto pro-growth policy, since many people seem to be attracted to an area that is careful to restrict new development.

The urban pattern. In many cities the planning process attempts to arrange land uses in relative proximity to supporting land uses--convenience shopping near residential districts, for example. In Hemet, however, it has been observed that residents tend to blanket the area for shopping and services, depending much more on the offerings of a merchant or on price differentials--where the best sale merchandise is to be found, for example--than on the location of that merchant relative to the shopper's home. Hemet is thus subject to land use scatterization, with the only district retaining vestiges of a traditional urban pattern being the older central business district.

Growth corridors. The regional growth pattern currently being developed follows a close relationship to private and public investment activity. The location of development closely accompanies areas where market forces determine investments will be fruitful. In addition, investments by the public sector in the form of capital improvement budgeting and service extensions follow a similar pattern of development to that of private investment.

Growth is physically manifest in linear "growth corridors," or in concentrations centering around "nodes." In the

first instance, corridors typically require some form of surfact transportation, as highway or railroad. In the second, nodes usually center around a "break in bulk" point along transport lines or where certain land use activities (commercial, industrial, public facility) are concentrated.

In Hemet's case, the most obvious growth corridor within the planning area extends along Highway 395 from Rancho California on the south to Riverside on the north. A secondary corridor has been developing over the years along Highway 74, as an east-west corridor. More recent and less intense tertiary corridors are expanding north-south along State Street and San Jacinto Avenue in Hemet.

The most evident type of node affecting growth in the planning area is the shopping center and the multi-use large scale development. A growing node is developing at the intersection of Sanderson and Florida as an example of the first case, and at Rancho California and Sun City, including Lusk Homes, as an example of the second.

Local impacts of regional trends. Certain growth patterns will tend to influence the market area centered on Hemet, as discussed above under "Economic Setting." For instance, the industrial growth that is stretching along the I-15 corridor from Rancho California and Temecula on the south to Riverside on the north may diminish within a short span of years the industrial potential of Hemet. This potential situation is due, primarily, to the greater locational assets that this corridor provides.

Accompanying this industrial growth trend are a number of major housing developments that will complement industrial growth by providing a wide range of housing types in a wide range of costs. Like industrial growth, the housing development in the extended Hemet influence area--where annexation seems infeasible--may greatly affect the housing development potential in Hemet.

Another facet to the waning influence that Hemet may exert is the possible improved services and governmental responsibility that could be provided through the incorporation of some of the communities lying within Hemet's influence area. Incorporation would be an inducement to certain kinds of economic growth. The communities of Rancho California and Temecula, Idyllwild, and Sun City could limit Hemet's influence by providing certain public services for themselves and induce the development of corresponding private services and overall economic development. Already the trend in Riverside County has seen

Cathedral City incorporate and questions of incorporation being studied by Moreno Valley, Rubidoux, and other areas. On the other hand, Riverside County would lose more influence in Hemet's market area and result in a potential asset to Hemet.

Labor market area and characteristics.¹ Statistics on labor have been gathered using a market area consisting of Hemet, San Jacinto, Gilman Hot Springs, and Idyllwild. This area had a population of 62,000 in 1977. Including agricultural employment, the total employment for the area was 13,563 in that year. This employment is broken down by sector in Table 3.

Table 3: Employment in Hemet Market Area, 1977

<u>Type</u>	<u>Number employed</u>
Agriculture	n.a.
Agricultural services	158
Construction	1,105
Manufacturing	
Transportation, Communications, Utilities	2,318
Retail trade	2,150
Wholesale trade	929
Finance, Real Estate, Insurance	858
Services	2,387
Education, Public administration . . .	1,199
Other, including agriculture	1,080

By grouping these figures into general employment sectors, a better impression of the nature of the labor force can be seen. Table 4 depicts these groupings:

Table 4: Employment by sector, 1977

<u>Employment sector</u>	<u>Number employed</u>
Primary production.	1,080
Secondary production	1,379
Tertiary employment	7,587
Quaternary employment	3,517

1 Based on the Community Economic Profile for Hemet, Riverside County Department of Development, July 1981

These groupings are based on:

Primary production: agriculture and natural resource extractive industries.

Secondary production: manufacturing.

Tertiary employment: agricultural services, construction, retail trade, wholesale trade, finance, real estate, insurance, and services.

Quaternary employment: transportation, communications, utilities, education and public administration.

According to this analysis, the Hemet labor market area is clearly dominated by the tertiary sector, with over one half of the labor force. This sector, combined with the other major service category of quasi-public and public employment (the quaternary sector), indicates Hemet's economic orientation as both a market center and residential community. Land use distributions by type clearly reflect this breakdown of the labor force.

A comparison of these 1978 figures (taken from the special census of that year) with the labor statistics from 1968 (excluding Idyllwild) reveals a particular trend toward a service economy. In 1968 there were 4,700 jobs in the Hemet labor market area. Over a period of ten years, the labor force increased by 287%. During this same period, service-type jobs increased from about 1850 (39 percent of the labor force) to about 11,000 (82 percent of the labor force in 1978). A much smaller increase occurred in manufacturing employment, though the increase is still significant. In 1968 there were about 750 persons employed in manufacturing, and in 1978 the number totaled 1,379, or an increase of 54 percent. The 1968 Hemet-San Jacinto Area General Plan states: "In terms of future growth, an increase to approximately 9,300 jobs by 1980, with the greatest increase coming in manufacturing and services, is estimated." (page 17d) This forecast was short by over 4,000 jobs, even excluding Idyllwild, which had developed its own small employment sector. This underestimation was most likely the result of not anticipating the service demands and the related labor needs that the residential growth brought to Hemet.

Industrial location. Industrial employers with facilities located in the planning area have tended to require only moderately skilled labor and have largely used the existing labor pool of Hemet, consisting of many elderly workers. These industries have probably not contributed to the population growth of the city to the same extent that similar-sized employers would be expected to do in most

cities, since much of the labor pool preceded the industries to the area. In addition, much of the labor pool is discretionary meaning that many persons otherwise supported by pensions may choose to work in order to enhance their income.

A survey of industrial land uses surrounding the Hemet Ryan Airport indicates that these industries depend little on the airport itself for essential transportation services. Neither commercial passenger service nor air freight facilities are available at the airport. The area surrounding the airport has attracted industrial uses rather because of available zoning, large sites for unhampered development, and compatibility with airport noise contours.

Environmental constraints to land use planning

Flooding. Flooding is a major issue in planning for the southwest area of Hemet, as well as in the developed portions of the city and San Jacinto Valley. In the southwest area, the natural Salt Creek water course can no longer contain storm water, forcing this water to find other paths through the city in a westerly direction. Also, the storm drainage system in Hemet is critically inadequate, such that the road network becomes a collector of flood waters. Many of Hemet's citizens feel that development in the county to the east is causing additional flooding in Hemet. The Riverside County Flood Control District has prepared a master plan for the channelization for Salt Creek and a master drainage study for Hemet, including an environmental impact report (EIR). This EIR contains two alternative flood control channels: one containing the 100-year flood, and an interim channel to mitigate the effects of storm drain channels in the city of Hemet on downstream property and to allow implementation of the master planned facilities. In addition, the Riverside County Flood Control District has prepared a drainage plan for West Hemet, north of Florida Avenue.

Flood plain management. The City of Hemet participated in the flood plain management program and was the subject of a flood insurance study prepared by the U.S. Department of Housing and Urban Development Federal Insurance Administration. The flood insurance study discusses the principal flood problems in the city and recommends possible flood protection measures. A flood boundary map and flood insurance rate map were prepared as part of the study.

To satisfy the criteria of flood plain management, overall general plan policies for the development of the 100-year flood plain must, at a minimum, prohibit development or encroachment within the regulatory floodway that would increase flood heights, and limit construction to some degree within the 100-year flood plain until stream improvements are made.

The construction of the Salt Creek Channel is a major issue in Hemet and the San Jacinto Valley. Implementation of the Hemet drainage plan will require the construction of the Salt Creek Channel, as an outlet from the intersection of the Hemet Channel into Salt Creek to Sun City. The portion of the Salt Creek Channel east of the Hemet Channel to Lyon Avenue is not necessary for the Hemet drainage plan, but it will allow the vacant and agricultural lands in the floodway of the southwest area to be developed.

The flood areas of the Hemet planning area are shown in Figure 8 of the Open Space and Conservation Element document. A substantial portion of the southwest area of Hemet is subject to flooding. Within the existing developed portion of the City, large areas are designated as 100-year flood plain, but have a flood height of less than one foot and therefore do not come under the Flood Insurance Administration requirements.

Detailed planning for flood hazard mitigation awaits the special drainage and flood control element now being prepared for the City by Born, Barrett and Associates. When this information becomes available, it should be integrated with the land use plan.

Hemet-Ryan Airport Noise Contours

Although the airport does not have commercial operations, the area of aircraft noise impact is somewhat larger than would be expected for an airport of this size and amount of traffic. The increase in noise impact is due to the use of Hemet-Ryan as a joint attack base for aerial firefighting activity by the California Division of Forestry and the United States Forest Service. Hemet-Ryan Airport has become the primary base for firebomber operations in Southern California because of the closure of numerous alternative airports to firebomber operations.

The closure of these alternative operation bases was largely due to the uncontrolled urbanization in the vicinity of the airports that resulted in increased citizen complaints about aircraft noise and concern for the safety of new residents who occupied housing units constructed along the flight path.

The continued service by firebombers is important to the City of Hemet for a number of reasons.

- The Hemet-San Jacinto Valley watershed is vulnerable to wildfire, and much of the watershed is remote and rugged terrain that requires aerial tankers for effective firefighting.

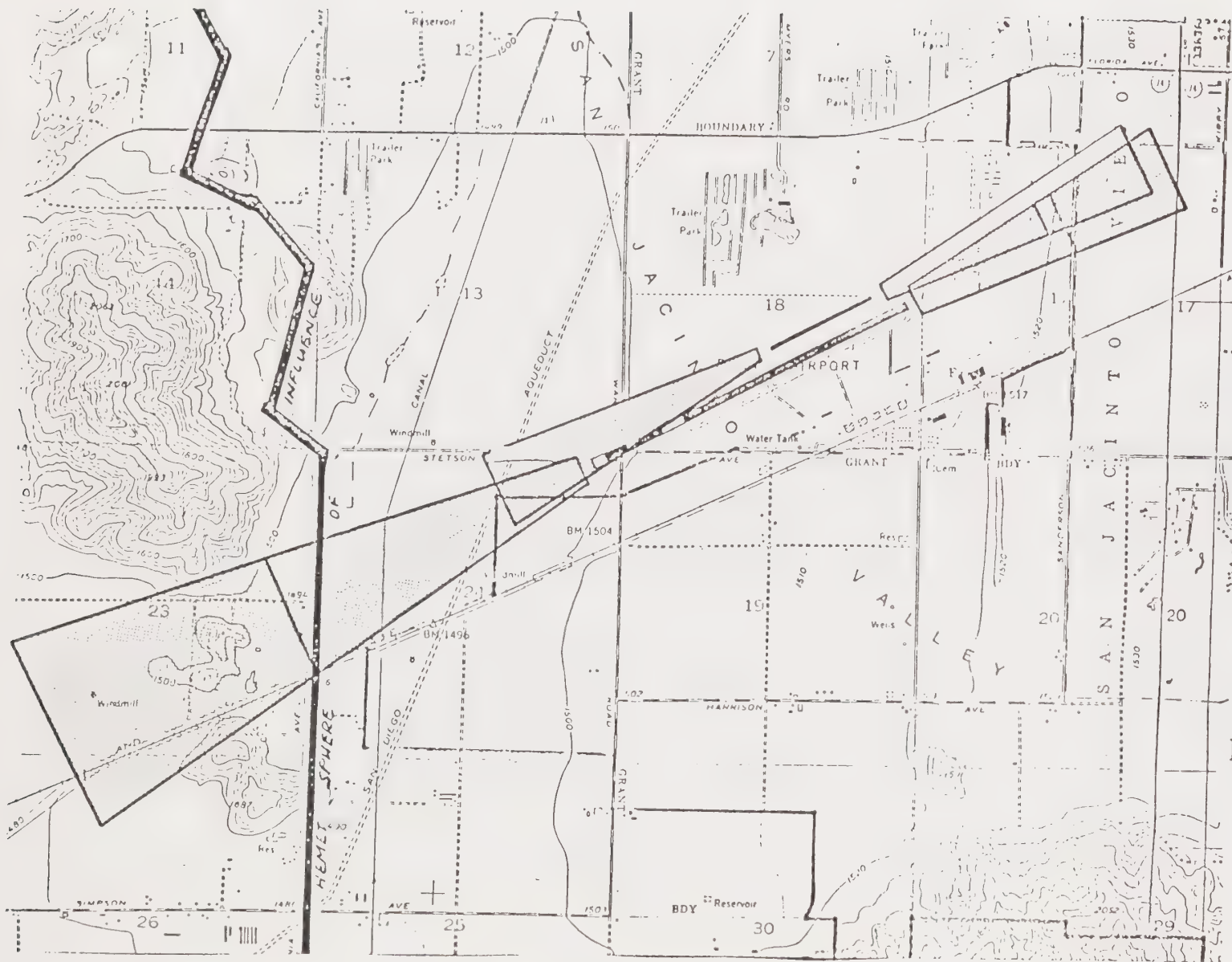
- The City has a serious flooding problem that would be dangerously increased if the watershed were to be defoliated by wildfire.
- Damage to life and property resulting from wild-fires and watershed destruction in the operational rea of the airport places direct financial burdens on the citizens of Hemet.
- Airport operations provide a direct financial benefit to the Hemet area throught the local purchase of supplies and by providing employment for area residents.
- General aviation activities at Hemet-Ryan provide a service to a small but significant portion of the population who use the airport for business and recreational flying.

Hemet-Ryan Airport Land Use Plan. Land use policies concerning the operation of the Airport and land use controls for properties near the airport are contained within the Hemet/Ryan Airport Position Paper. The Position Paper was prepared by a Subcommittee comprised of the City of Hemet Planning Commission, Riverside county Planning Commission and the Riverside County Airport Land Use Commission. The purpose of the plan was to define appropriate land uses in order to protect the health, safety, and welfare of potential users of land within the Airport's influence area.

The Subcommittee reviewed the noise and risk (hazards) aspects of the existing and projected Airport influence areas. Prior plans utilized only noise as the evaluation factor for defining influence areas. To effectively evaluate and regulate land use proposals three (3) influence areas were identified through the Position Paper: 1) Influence Area I, utilizing FAA Approach Zones; (See Figure 1) 2) Influence Area II, utilizing existing flight patterns with noise contours and Approach Zones (See Figure 2) and; 3) Influence Area III, utilizing flight patterns around the airport which may affect property owners due to noise, glare or vibration from circling aircraft (See Figure 3).

The County and City intend to continue the use of the airport for firebomber activity. The Position Paper places restrictions on land use around the airport in order to retain compatibility with the airport. The plan consists of the following policies which establish restrictions on adjacent land uses and Airport operations.

- Policy 1: Area I shall be kept free of all high risk land uses. (See Figure 1). Residential development (2-1/2 acre lot size and larger) will only be permitted within the western 5,000 feet of the western approach zone.
- Policy 2: Area II shall have a minimum residential lot size of 2-1/2 acres. (See Figure 2) Commercial, industrial and agricultural land uses are acceptable in this area.
- Policy 3: In Area III, aviation easements will be required for all land uses (See Figure 3). The height of the aviation easements will be from runway ground elevatoin within 5,000 feet of the runway in the approach zones and from 150 feet above runway ground level elevation throughout the remainder of Area III.
- Policy 4: New housing to be constructed in the 1986 55 LdN contour, as described by the UltraSystems Study dated 1978, shall be sound-proofed as necessary to achieve 45 LdN interior sound levels or quieter.
- Policy 5: A new noise study is not necessary at this time. The Riverside County Airports Director should control the flight operations and facilities at Hemet-Ryan Airport so as not to increase the noise contours included in this plan. Temporary changes in flight operations may be made during the fire season and in the event of emergencies.
- Policy 6: Before any major airport change is planned, involving land use, noie sources or policy changes, a Committee made up of representatives from the City of Hemet, County of Riverside, and Airport Land Use Commission (the Aiorrt Subcommittee) shall be formed to evaluate these changes and forward their recommendations to the Hemet City Council, Riverside County Board of Supervisors and the Riverside County Airport Land Use Commission.



NORTH
NO SCALE

FIGURE 1

EXHIBIT I
IMAGINARY APPROACH SURFACES
(AREA I)

-21.5

LEGEND

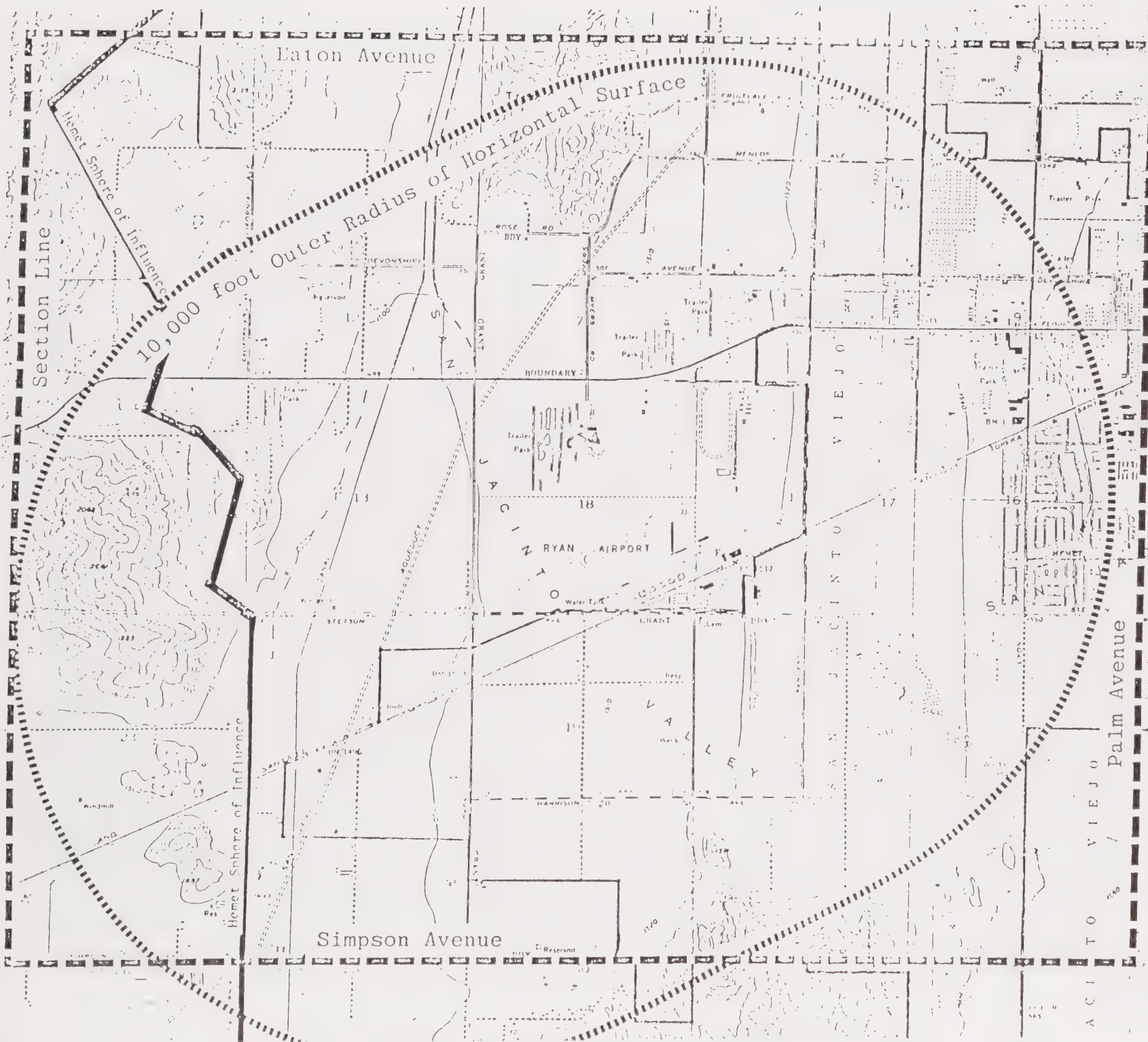


FIGURE 3

EXHIBIT III
AIRPORT-INFLUENCED
AREA
(AREA III)

LEGEND

Airport- fluenced

To aid in the identification of high and higher risk land uses, the following lists were prepared.

High Risk

- (1) high concentration of people,
- (2) critical facilities, and
- (3) flammable or explosive materials

Higher Risk

Places of Assembly:

auditoriums, churches, schools, carnivals, drive-in theaters, etc.

High Patronage Services:

bowling alleys, restaurants, theaters, motels, banks, etc.

Large Retail Outlets:

department stores, supermarkets, drug stores, etc.

Residential:

smaller than 2-1/2 acre lot sizes,

Critical Facilities:

telephone exchanges, radio/t.v. studios, hospitals, etc.

Flammables:

bulk fuel storage, gasoline and liquid petroleum service stations, manufacture of plastics, breweries, feed and flour mills, etc.

The above lists were not meant to contain a complete listing of risk uses, only to provide comparisons when evaluating the appropriateness of future uses.

Slopes. The San Jacinto Valley is generally flat with slopes that do not exceed 12 feet of vertical distance for every 100 feet of horizontal distance. Gibbel Flats in the Santa Rosa Hills and Park Hill, east of the present City limits, fall within this category. The areas that have steep slopes are the hillsides surrounding the San Jacinto Valley. The southwest area is the only part of the Hemet planning area with extensive slope coverage exceeding 25 percent. Figure 7 in the Open Space and Conservation Element document indicate slopes in the area, including the steep slope in the southwest area near the Domenigoni Mountains. Development in this terrain could increase the tendency for landslides.

The implications for steep slopes on land use include:

- Construction on slopes exceeding 25 percent requires extensive grading to provide automobile access to the site unless expensive and innovative structural measures are employed.
- Limiting development on steep slopes will preserve the vistas of hillside areas which surround the San Jacinto Valley, thus preserving an important amenity.
- Steep slopes represent significant acreage in the county and become a major environmental consideration for development as annexations occur.

Seismicity and geology. The Hemet area is part of the San Jacinto Fault Zone, which runs along and parallel to the San Jacinto Mountains. Four of its five faults are active and have caused severe damage in Hemet and San Jacinto during the 1899 and 1918 earthquakes. Recurrence of strong earthquakes in the Hemet-San Jacinto area is of great concern, as it has been the location of earthquakes among the most severe in Southern California.

In general, groundbreaking and surface ruptures are primary hazards for the San Jacinto Valley. These effects are attributed to moderately shallow alluvium under the surface of most of the area. Settlement of soils due to groundbreaking is a major secondary hazard. It is evidenced by the large area of subsidence ten miles west of San Jacinto, where nearly one square mile of land significantly subsided during the 1899 earthquake. Other secondary hazards include liquefaction, landslides, and seiches. Of these, only landslides present a major potential danger to this area, due to the steep hillsides.

Most of the existing developed portion of Hemet falls within earthquake zone V (see Table 4 of the Seismic and Public Safety Element). Although it is generally recommended that minimal development occur in such a zone, the City of Hemet already occupies its site. Therefore, the City needs

building codes and emergency programs which deal with the seismic conditions of the area.

Figure 1 of the Seismic and Public Safety Element indicates the fault lines in the Hemet area. Most of the southwest area is about two miles from the San Jacinto Fault zone and is underlain by alluvium of intermediate thickness. The land use and risk matrix in the City of Hemet seismic safety and public safety general plan elements of 1976 indicate that light industrial, low-density residential, warehousing and open space uses are suitable for this area.

The uses generally recommended as unsuitable for this area due to its seismicity are electrical facilities, heavy industry, office buildings, commercial centers, hotels and motels, banks and financial institutions, high-density residential, service stations, and health care clinics.

Portions of the southwest area also include hillsides, where groundshaking and landslides are possible and the same land use risks apply.

Archaeology. Ancestors of a Native American group now dwelling in the Soboba Indian Reservation east of Hemet once occupied the area near the Ramona Bowl. Their village covered approximately three square miles, but archaeological remains from the ancestral tribe have been found in other areas around Hemet as well. Rock paintings and carvings, cave shelters and milling slabs trace their activity to many of the hillsides and mountains of the San Jacinto Valley. Figure 10 in the Open Space and Conservation Element indicates the known archaeological sites.

Soil suitability. The entire city of Hemet, other than a small corner in the southwest, is located on prime agricultural land (see Figure 6 in the Open Space and Conservation Element). This prime soil area extends over most of the San Jacinto Valley floor to the north, east and south, but the valley areas to the west generally fall within the soil classes with moderate limitations to agricultural uses.

Prime agricultural soils are generally the easiest to develop for urban uses. They are in relatively flat alluvial areas, and are usually well drained and easy to excavate. In many areas such as Hemet, urban growth occurs at the expense of prime agricultural soils. This conversion of lands from agricultural uses reduces the extent to which agriculture and its supporting economic activities can serve

the economic base of the City. In the short term this loss can be compensated for by the economic activities associated with the new urban development, but the long-term effects are not so certain, given the potential for the increased value of agricultural production in the vicinity of a major metropolis. Since agricultural conversion is revocable only through great expense, a conservative conversion policy by the City of Hemet is advised.

Agricultural preservation is a designation of the California Land Preservation Act of 1965 (the Williamson Act), which grants tax relief to owners of agricultural property who agree not to develop their land for a minimum of ten years, renewable each year (Gov. C. 51200-51295). Participation in the program by property owners is voluntary. The State is very concerned about the diminishing supply of agricultural land in California. Hemet has not utilized the Williamson Act to preserve its agricultural resources to date.

Erosion hazard. In Hemet, problems of erosion are limited to the steeper slopes of the Santa Rosa Hills to the southeast and the Domenigoni Hills to the southwest. These areas will only become critical if development occurs on the slopes. In such a case, the intensity of development and the handling of runoff capacity will be critical to erosion control.

Soil subsidence. Subsidence has occurred in several areas in Hemet, as indicated in the Seismic and Public Safety Element, page 27. Although structural damage to buildings has resulted from subsidence, soil tests for future development should minimize future difficulties, and land use need not necessarily be restricted on this basis.

Fire hazard. The City of Hemet Fire Department has indicated that the overall fire hazard in the city, as compared to other communities in the region, is termed "moderate" on a scale of severe, moderate, and minimal. Some concern is justified for a conflagration potential in certain residential areas due to a combination of high wind conditions, wood shingle roofs and high concentration of structures. The fire hazard potential is discussed in detail in the Seismic and Public Safety Element, page 28ff.

Infrastructure constraints

Sewer and water capacities. The City of Hemet supplies its jurisdiction as a retailer with water. Water is purchased from the Eastern Municipal Water District. Lake Hemet Municipal Water District provides water to certain small areas of the city. Hemet's maximum pumping capacity is 5 million gallons per day. Average consumption on a daily basis is currently about 3.5 million gallons. The provision of water by E.M.W.D. and the City has been able to keep abreast of growth. This is in view of the fact that water facilities and capacities have been developed more as a reaction to the development growth pattern and its water demand than by planning development based on where and how water service facilities and capacities are planned. Planning, therefore, for water supply has been according to demand. It is important to note that this plan is not, conceptually, a growth management plan. Such a plan would require a capital improvement program that specifies where, when and how much water supply and sewer service will be developed over a specified period of time. It would pre-determine growth trends and patterns to a large degree and in addition to market forces.

Currently, the cost of 1,000 gallons at the consumption rate of 100,000 gallons per month is \$0.449. The cost of 1,000 gallons in quantities of 1,000,000 per month is also \$0.449. Water connection charges range from \$175 to \$500 for meters ranging in size from 5/8 inches to two inches.

In the case of sewer service, the City of Hemet collects sewage while the Eastern Municipal Water District treats it. The capacity of the existing treatment plant located in the northwest portion of the San Jacinto Valley is five million gallons per day. Peak flow has been 4.5 million gallons per day. An additional facility is planned for the Winchester area, on Winchester Road, and property amounting to forty acres has already been purchased for this facility.

It is the policy of the Eastern Municipal Water District and the City of Hemet that water and sewer lines will be extended wherever funds for such extension is forthcoming, to serve new developments. Thus service extensions are not construed in this plan as land use planning tools.

Electricity. The Southern California Edison Company provides electrical service to the City of Hemet. Southern California Edison expects to meet all electrical load requirements unless demand exceeds their estimates or their

assured load management efforts are not effective. Thus, the provision of electrical service was not taken as a land use determinant for this plan.

Streets. The City of Hemet has not prepared a long-term capital improvements program, as noted above. Thus this land use plan cannot anticipate where such monies would be spent for such major infrastructure investments as streets. The consultants therefore assume that funds will be directed where needed to support land use development. The preparation of a long-term capital improvements plan could assure a more orderly growth pattern, given the uncertainty of future infrastructure demands. This is particularly true with respect to street construction. Developers can be expected to assume the costs of providing local streets in their developments, but each new urbanized area will place increasing demands on all streets in the City, especially collector and arterial streets in the vicinity of the development.

Land use and circulation conflicts. As stated in the Circulation Element, most current serious congestion problems occur within the central business district, particularly along Florida Avenue. More efficient circulation within the business district should continue to be a major planning concern for Hemet, particularly given the role of Florida Avenue as a through arterial. In general, the terrain and available open land in the Hemet area should allow the implementation of a master circulation plan sufficient to meet the city's projected land use needs. In some areas, however, especially in the western part of the city, development has already taken place and has set precedents for not continuing the major circulation system specified in the Hemet-San Jacinto and Riverside County general plans. Current developments along parts of Lyon and Palm Avenues will preclude improving these streets to their planned widths. Similarly, developments south of Stetson Avenue have eliminated the option of extending Kirby Avenue south of Stetson and will require an alignment of Harrison Avenue or a realignment of Simpson Avenue in a more southerly position than planned. It is anticipated in this plan that future land use development will be in accordance with appropriate street construction.

III. GENERAL PLAN GOALS AND POLICIES

Each of the nine elements in this general plan revision contain recommended policies and implementation measures, many of which have direct bearing on land use policy. In this section, policy recommendations from all elements are summarized. These measures are subject to revision during the review and adoption procedure by the City of Hemet. A more complete discussion of the proposals from the other eight elements may be found in their respective documents.

I I I

G E N E R A L P L A N

G O A L S A N D P O L I C I E S

HOUSING GOALS AND POLICIES

Overall Housing Goals

The general goals of the Housing Element are as follows:

1. The attainment of decent housing within a satisfying living environment for households of all socio-economic, racial, age and ethnic groups in Hemet.
2. The provision of a variety of housing opportunities by type, tenure, and cost for households of all sizes throughout the City.
3. The development of a balanced residential environment with access to employment opportunities, community facilities, and adequate services.

In order to attain these goals, Hemet will utilize all relevant housing programs that are presently available at the State and Federal level as well as any relevant future programs that become available for local use without encumbering local public funds or creating any major administrative costs to the City. The City will also utilize existing development standards that generate units through normal market forces as another major means of satisfying projected local housing need. The policies and programs are organized around the following five issue areas, which are identified by the California Department of Housing and Community Development as important priorities for addressing local housing problems:

1. Programs for helping to assure equitable access to housing;
2. Programs for assuring adequate provision of housing;
3. Programs for utilizing opportunities to create new housing sites;
4. Programs for preserving and rehabilitating existing housing stock; and
5. Programs for helping to encourage the maintenance of affordable purchase and rental costs.

Policies to Improve Housing Accessibility

In order to assure accessibility of decent housing for all, the City of Hemet shall:

- a. Promote fair housing practices through the City;
- b. Promote housing which meets the special needs of handicapped and elderly households;
- c. Encourage the provision of adequate numbers of housing units to meet the needs of families of all sizes;
- d. Encourage the provision of sufficient rental units for families with children; and
- e. Utilize the existing Federal, State and County housing assistance programs that are designed to improve the accessibility of housing for all socio-economic and special needs groups.

Policies to Provide Additional Affordable Units

To ensure adequate provision of housing for all economic segments of the community, the City of Hemet shall:

- a. Undertake economically feasible programs to provide for housing throughout the community to meet the needs of low and moderate income households.
- b. Continue to utilize the County Housing Authority's Federal, State and County housing assistance programs.
- c. Encourage the participation and financial commitment of private entities in attaining housing goals.
- d. Encourage the provision and continued availability of a range of housing types throughout the community with variety in the number of rooms and level of amenities.
- e. Promote the availability of sufficient rental housing stock to afford maximum choice of housing types for all economic segments of the community.
- f. Encourage the retention of existing numbers of mobilehomes and investigate areas for potential new mobilehomes in single family residential areas.

Policies for Adequate Housing Sites

To assure the adequate provision of sites for housing, the City of Hemet shall:

- a. Locate residential uses in close proximity to commercial and industrial areas and transportation routes to provide

convenient access to employment centers.

- b. Plan for residential land uses which accommodate anticipated growth of new employment opportunities.
- c. Utilize existing Federal and State criteria for identifying and evaluating potential sites for assisted housing. (See Appendix for Site Criteria.)

Policies for Neighborhood/Housing Preservation

In order to preserve housing and neighborhoods, the City of Hemet shall:

- a. Encourage the maintenance and repair of existing owner occupied and rental housing to prevent deterioration in the City.
- b. Encourage the rehabilitation of substandard and deteriorated housing, where feasible.
- c. Where possible, take action to promote the removal and replacement of those substandard units which cannot be rehabilitated.
- d. Provide and maintain an adequate level of community facilities and municipal services in all community areas.
- e. Improve and upgrade community facilities and services where necessary and feasible.

Policies to Preserve Affordability

In order to preserve affordability, the City shall promote the continued affordability of all units produced by taking the following actions:

- a. Encourage the continued affordability of those units utilizing public funds for rehabilitation;
- b. Encourage energy efficient housing;
- c. Continue to plan and facilitate the implementation of low and moderate income housing through all relevant Federal, State and County housing assistance programs, as well as local development standards.

Housing Program Descriptions

- (1) Program Description: Conduct a City-wide survey of rental housing and new housing available to families with children. Create a brochure for distribution to interested persons throughout the City and local social agencies.

Responsible Agency: Hemet Community Development Department

Funding Source: Department budget through application for any available grant sources

Schedule: 1982 and ongoing yearly update

- (2) Program Description: Conduct a City-wide survey of residential housing suitable for handicapped occupants. Create a brochure for distribution to interested persons throughout the City and local social service agencies.

Responsible Agency: Hemet Community Development Department

Funding Source: Department budget through application for any available grant sources

Schedule: 1982 and ongoing yearly update

- (3) Program Description: The City shall endeavor to meet identified handicapped housing needs through the development of an ordinance to require a percentage of handicap units to be provided in all new development projects or an in-lieu fee.

Funding Source: General Fund through the in-lieu fee paid by developers

Schedule: Spring 1982

- (4) Program Description: Work with State and Federal legislative representatives and urge that regulations controlling financing and construction of housing for persons in need of housing assistance and subsidy programs be eased.

Responsible Agency: City of Hemet

Funding Source: Department Budgets

Schedule: Ongoing

- (5) Program Description: Support the existence of and utilize the services of the Riverside County Housing Counseling Service (RCHCS). All complaints of discrimination practices in housing within the City will receive attention. In addition, the RCHCS will provide counseling in landlord-tenant disputes, pre-purchase counseling for low-income home buyers and pre-rental counseling for low-income persons to clarify responsibilities as renters.

Responsible Agencies: Referrals - Hemet Community Development Department
Counseling - Riverside County Housing Counseling Service

Funding Source: Riverside County

Schedule: Ongoing

- (6) Program Description: Contract for and utilize all applicable housing programs available to the City through the County of Riverside Housing Authority to satisfy a portion of the City's identified housing needs. These general programs include, but are not limited to the following list:

1. Housing Improvement Programs (HIP)
2. Low interest rate loans for rehabilitation
3. Senior Home Repair
4. Public Housing
5. Rental/Purchase Assistance through all available Federal, State, and County programs

Responsible Agencies: Referrals - Hemet Community Development Department
Program Administration - County of Riverside Housing Authority

Funding Sources: Federal, State, and County funding

Schedule: Spring 1982 and ongoing

- (7) Program Description: Provide consultation to aid private developers in expanding housing opportunities by encouraging pre-application conferences to inform them of housing needs and available City ordinances, etc. to produce affordable housing.

Responsible Agency: City of Hemet

Funding Source: Existing department budget

Schedule: Ongoing

- (8) Program Description: Consider a reduction in the minimum lot sizes for R-1 and R-2 zones. Reassess location of R-2 zones in infill areas. Encourage and facilitate compact development in infill areas when it does not overextend existing infrastructure.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget

Schedule: Spring 1982

- (9) Program Description: Encourage, on a continuing basis, use of factory-built housing as approved by the California Association of Building Officials by providing information regarding cost/benefit and feasibility of factory-built housing.

Responsible Agency: Hemet Community Development Dept.

Funding Source: General Fund

Schedule: Ongoing

- (10) Conduct a City-wide rental housing and mobilehome park space vacancy rate survey for use in consideration of housing planning activities. Combine these efforts with the annual State Department of Finance survey.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget

Schedule: 1982

- (11) Program Description: Initiate an outreach campaign to solicit participation of private developers in affordable housing programs; maintain a roster of interested firms.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget, private developers, and private lending institutions

Schedule: Upon adoption of the Housing Element

- (12) Program Description: Encourage the County to provide a satellite office of Riverside County Housing Authority within the Hemet area.

Responsible Agency: City of Hemet, County of Riverside

Funding Source: County of Riverside Housing Authority

Schedule: January 1982

- (13) Program Description: Develop homeownership co-investment programs using funds provided by the State of California or private financial institutions in conjunction with the County of Riverside Housing Authority and/or private financial institutions and other entities acting as co-investors to help low and moderate income families and individuals bridge the gap between their financial resources and the funds necessary to purchase a home.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget for feasibility study; private and public funding sources for co-investment to be identified

Schedule: Ongoing, beginning in 1982

- (14) Program Description: Establish procedures and regulations for encouraging the incorporation of energy efficiency into any new or rehabilitated residential unit by utilizing the Uniform Building Code regulations.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department budget through any available grants

Schedule: Ongoing, beginning 1982

- (15) Program Description: Continue to enforce development standards through the implementation of the PCD zone, etc. to provide for a variety of housing types and costs throughout the City and sphere of influence area.

Responsible Agency: City of Hemet; County of Riverside

Funding Source: Department budget

Schedule: Ongoing

- (16) Program Description: Continue efforts to solve Salt Creek Flood problems by implementation of interim or permanent channel.

Responsible Agencies: City of Hemet; County of Riverside

Funding Source: County and local funds

Schedule: Ongoing

- (17) Program Description: Develop site selection criteria to use to identify publicly owned sites which could be utilized for low and moderate income housing developments. Utilize the existing Federal standards as a guideline.

Responsible Agency: Hemet Community Development Dept.

Funding Source: General Fund

Schedule: 1982

- (18) Program Description: Continue the encouragement of PC Developments as aids in housing rehabilitation and new construction to add flexibility to land utilization and building recycling and to increase the potential for a variety of housing types/cost.

Responsible Agency: Hemet Community Development Dept.

Funding Source: Department Budget

Schedule: Ongoing

- (19) Program Description: Encourage the development of a capital improvement program to provide for the orderly development of facilities and services in all areas of the community.

Responsible Agency: City of Hemet

Funding Source: General Fund

Schedule: 1982

- (20) Program Description: Upon request, continue to conduct occupancy inspections whereby each time a residential unit or apartment complex is sold, it is inspected for compliance with code requirements that emphasize safe and sanitary housing conditions. Adopt a code-enforcement policy for housing rehabilitation that will emphasize safe and sanitary housing and correction of health and safety violations and not necessarily force rigorous adherence to code compliance.

Responsible Agency: City of Hemet

Funding Source: City of Hemet; Possible CDBD funds

Schedule: Ongoing

- (21) Program Description: Monitor housing conditions and coordinate interdepartmental data in order to identify the need to expand existing rehabilitation programs and help prevent deterioration in marginal neighborhoods.

Responsible Agency: Hemet Community Development Dept.

Funding Source: CDBG funds

Schedule: Ongoing

- (22) Program Description: Voluntary (ie. "sensitive") code compliance, coordinated, where applicable, with the rehabilitation programs, to help prevent deterioration in marginal neighborhoods.

Responsible Agency: Hemet Community Development Dept.

Funding Source: CDBG funds

Schedule: Ongoing, from 1982

- (23) Program Description: Develop building and design standards to reduce the cost of energy to residents.

Study the feasibility of implementing energy conservation measures through the subdivision review and building review process. Information on what other jurisdictions are doing should be compiled as well as a cost-benefit report on energy conservation measures that would be cost effective for the City. The costs of energy will continue to increase, and coupled with present and future energy shortages, heating and cooling are becoming a significant housing cost. Some of the proposals to review include:

1. Building orientation;
2. Landscaping for summer shade and winter warming;
3. Solar space and water heating;
4. Increased building insulation;
5. Weather-stripping and caulking of buildings;
6. Window glazing;
7. Other building and site design criteria.

Considered in the cost-benefit study will be the tax credits available to homeowners for those energy conservation methods.

Responsible Agencies: City of Hemet

Financing: General Fund

Schedule: 1982

- (24) Program Description: Seek all available funds and assistance to expand energy options to City of Hemet residents.

There are presently Federal, State, and private foundation and utility funds designed to develop energy programs, retrofit existing buildings with energy conservation devices, and for planning new building for energy efficiency. The City should utilize these funds whenever possible.

Responsible Agencies: City of Hemet

Financing: Federal, State, and utility funds

Schedule: Ongoing

- (25) Program Description: Plan for low and moderate income housing in the City's sphere of influence in conjunction with the County Planning staff. By working through Riverside County Housing Authority to implement plans for low and moderate income housing, maximum benefits can be obtained.

Responsible Agencies: City of Hemet, Community Development Dept.
County of Riverside, Planning Dept.
County of Riverside, Housing Authority

Financing: General Fund for City of Hemet and existing funding for other agencies

Schedule: Ongoing

- (26) Program Description: Continue to work toward the provision and allocation of additional development of low and moderate income rental housing as authorized by the passage of the Article 34 referendum within the City. Housing developed under this authority would benefit both elderly and handicapped as well as family households.

Responsible Agencies: Riverside County Housing Authority

Financing: Federal and State programs for rental housing

Schedule: Ongoing effort of County Housing Authority

NOISE ELEMENT

GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS

The City of Hemet's primary opportunities to manage the noise environment within its jurisdiction lie in:

- (1.) Planning for compatible land uses near existing or proposed transportation facilities and roadways.
- (2.) Imposing noise standards on proposed noise-sensitive developments near existing or proposed transportation facilities and roadways.
- (3.) Adopting a comprehensive noise ordinance.

The following goals, policies and implementation programs are to be used by the City of Hemet to protect the health and welfare of its existing and future residents.

Goals

The goals of the noise element are to identify potential noise problem areas, establish acceptable levels of noise levels through proper land use planning and noise mitigation techniques, insure continuing evaluation of the noise environment, and promote noise awareness in the community.

Policies and Implementation Programs

- (1.) Identify the primary noise producing activities within or near the boundaries of the City, and calculate existing and future noise exposure levels resulting from the primary noise producing elements, i.e., aircraft and vehicle traffic.
- (2.) Adopt acceptable levels of noise for "noise sensitive" land uses within the City of Hemet:
 - As a condition of Tentative Map approval and building permit issuance for any use within the Airport Influence Area (the area defined in Figure 3 "Airport Influence Area") an Avigation Easement shall be recorded in favor of the City of Hemet.
 - Require an interior noise level of 45 Ldn for all newly constructed residences, hospitals and nursing homes and an exterior noise level of 60 Ldn in usable yard areas of residences and nursing homes.
 - Restrict new schools of standard construction within an exterior noise environment equal to or greater than 65 Ldn.

- (3.) Adopt a comprehensive noise ordinance.
- Limit the amount of noise which can be created on property owned, leased, or occupied, or otherwise controlled by such person, when such noise causes the noise level on any other residential or noise sensitive land use to exceed an acceptable level as determined by the City of Hemet.
 - Limit the hours of construction activity near residences, hospitals and nursing homes in order to reduce the intrusion of noise in the early morning and late evening hours and on weekends and legal holidays.
 - Limit the hours of non-emergency service and maintenance vehicle/related equipment during early morning and late evening hours.
- (4.) Promote the effective enforcement of State and Federal Noise Standards.
- Enforce the California Noise Insulation Standards (Title 25) by the appropriate City Department(s).
 - Encourage the enforcement of State Motor Vehicle Standards for cars, trucks and motorcycles through coordination with the California Highway Patrol and Hemet Police Department.
 - Encourage the Atchison Topeka and Santa Fe Railroad to maintain all Federally established noise standards.
- (5.) Establish truck routes within the City of Hemet.
- Prohibit commercial and industrial related truck traffic on secondary and residential collector streets.
- (6.) Reduce transportation and stationary related noise through proper acoustical site planning and acoustical construction.
- When determined necessary to reduce transportation related noise to acceptable levels, require noise mitigation measures such as lot and building setbacks, noise barriers, and acoustical treatment to noise sensitive land use structures.
 - Require setbacks, utilization of greenbelts, or the construction of noise barriers in areas proposed or occupied by commercial, industrial, and parking area when located adjacent to new or existing "noise sensitive" land uses.
 - Control noise intrusions from stationary outdoor machinery, appliances, and air conditioning units through proper location and acoustical enclosure.

- (7.) Evaluate community noise surveys and analyses or Enviromental Impact Reports which have been required for any new development projects.
- (8.) Encourage governmental agencies involved with noise source generation in the City of Hemet or adjacent County areas to provide detailed noise measurements. e.g., County Airport Land Use Commission.
- (9.) Establish and maintain coordination among Federal, State, and County and City agencies regarding new standards and criteria in evaluating community noise.
- (10.) Develop a method and maintain a list of noise complaints received in the City of Hemet and adjacent County boundaries.
- (11.) Provide for the review of the noise element every five (5) years.
- (12.) Inform residents of the effects of community noise and of the ways they can participate or assist in its abatement.
- (13.) Research and publish new information related to the various aspects of community noise.
- (14.) Enforce all Hemet/Ryan airport policies contained with the 1982 Airport Position Paper.

OPEN SPACE AND CONSERVATION GOALS AND POLICIES

The matrix analysis presented in Figure 2 of the Open Space and Conservation Element provides a means to give priorities to City goals and policies. These goals include:

Open Space Preservation

1. Efforts should be concentrated upon retaining as much agricultural land as possible.
 - a. A special committee of the City of Hemet and the County of Riverside should be formed to analyze the economic feasibility of continued utilization of agricultural lands.
 - b. The City shall support the application of the Williamson Act in establishing and maintaining agricultural preserves.
 - c. The City shall devise land regulation measures fitted to specific agricultural uses in the Valley, using health and safety provisions.
 - d. The California Department of Agriculture and the University of California at Riverside should be asked to investigate new crops which can be economically produced in the Hemet area.
2. The City shall encourage open space preservation.
 - a. The City will initiate plans for open space preserves in hilly areas on the peripheries of the planning area. Such plans will contain standards and criteria for resource conservation to include slopes, rock outcroppings, scenic resources, wildlife habitats, fire hazard management and development, to include road sitings, residential densities, other land uses and utility extensions.
 - b. The City will plan for flood control to encourage multiple use of flood channels. Recreational and agricultural uses are to be encouraged.
 - c. The City and County should develop subdivision and development practices in the Hemet area that will foster open space and land conserva-

tion concepts, such as, clustering, zero lot lines, coverage incentives, and density transfers.

- d. Hillsides should be valued for their scenic value. The City's newly adopted Hillside Development Standards (9-28-82) should be carefully enforced.

Resource Production

1. The City is committed to the stewardship and management of the production of the Hemet area's natural resources. This includes agricultural production, water conservation, mineral extraction, and soil conservation.
 - a. The City will enact measures to protect areas required for recharge of ground water basins.
 - b. The City will enact specific zoning regulations for the extraction of geologic minerals and materials.
 - c. The City recognizes the importance of the viability of agricultural production to the economy of the Valley. Therefore, the City will enact ordinances and regulations that support the continued use of agricultural lands and protects against problems of incompatibility with urban uses.

Outdoor Recreation

1. The City shall plan and program for the development of parks and other areas conducive to outdoor recreation. Such plans and programs should be designed so as to be responsive to the needs of multiple publics and people of various age groups.
 - a. Park facilities should be located so as to be accessible to people who might want to use them.
 - b. Park sites and elementary school sites should be coordinated in order to maximize neighborhood open space and park facilities. This will provide for a more efficient joint utilization of public property.
 - c. The City should take all steps necessary to

implement the provisions of the Quimby Park Acquisition Act. In doing this, the City should encourage the County to take similar steps that would lead to the acquisition of land for park purposes in the unincorporated areas of the Valley. Priority, in both cases, should be given to neighborhood park land acquisition with the second priority given to park facility development.

- d. The City should adopt park dedication requirements for large scale developments. This measure should be reviewed in terms of whether certain projects will generate a private demand that can be handled privately by the development or a public demand that suggests the need for public facilities.

Public Health and Safety

1. The City will provide for the necessary measures that will protect the health and safety of the Valley from misuse or neglect of natural phenomena.
 - a. The City will establish restrictions and standards to prohibit or control development in hazard areas, such as, flood plains, earthquake fault zones, areas consisting of collapsing soils, areas of instable slopes, and areas subject to wildland fires.
 - b. The lowering of property assessed values should be encouraged on non-buildable property, such as, floodways and earthquake faults.
2. The City will provide for the necessary measures that will protect the health and safety of the Valley from the misuse of land and the harmful externalities that can be generated by different land uses.
 - a. The City should support and use the present measuring device for smog and should immediately notify health facilities, schools, and places where people congregate of dangerous smog levels.
 - b. Only clean industrial development which is compatible with existing environmental quality should be encouraged. Such development should be channeled into planned areas.
 - c. Current development policies which allow great

amounts of land to be impervious to water percolation should be examined in light of the serious flooding caused by this excessive runoff.

- d. Water resources are of such importance to the area that they must be safeguarded through the preservation and use of natural percolation areas and the discouragement of all uses which result in the discharge of poor quality effluent.

Policies and Standards

Intergovernmental Relations. For the County to undertake the type of planning indicated as needed in the Hemet area would require that the County establish an intimate and current knowledge of the area. Ongoing, comprehensive planning, coupled with intimate local area knowledge is necessary if the Valley is to avoid the sprawl development experienced in most of the Los Angeles area. The City is the only locally-based government in the study area with the capability to assume the necessary leadership to create a planned environment where present and future generations can live healthy lives in inspiring surroundings. A decision-making process rooted firmly in local knowledge, local concern and local leadership is necessary to ensure future planning decisions which will avoid urban sprawl. Policies are:

1. Hemet shall act as the catalyst for area-wide open space planning by assuming a leadership role in assessing open space, recreation, and conservation needs and encouraging the establishment of plans to address them.
2. The City shall establish a regular referral process with the County through which the City, by having intimate knowledge of the area, will be able to play a key role in guiding future land use decisions as well as County plans, policies, and zoning regulations.
3. The City should seek ways to influence the water district and flood control district to employ policies and decisions that provide services and facilities consistent with the City's policies on land use and phasing development.
4. Hemet should coordinate planning activities with the City of San Jacinto in furthering Valley-wide policies beneficial to all residents in the area.
5. Encourage development to occur adjacent to existing

urbanized areas in order to preserve large parcels for adjacent uses.

6. In large developing areas, encourage the preparation of master plans that include private and public open space networks to help meet the overall need for open space and recreational amenities.
7. New innovations in housing design and density transfers aimed at preservation of agricultural land and/or permanent open spaces are encouraged.

Environmental Review. This plan establishes the precept that open space and conservation resources in the Hemet area need to be respected and protected. With this foundation, Hemet can help guide decisions in its area by gathering, maintaining, and utilizing information about the surrounding environment. The environmental information presented in this plan is really a first step towards an organized environmental inventory of the Hemet area. Such an inventory will make full utilization of the Environmental Impact Report process. Proposed developments within the planning area should now be checked with this inventory. This would indicate likely areas of environmental concern. Further research would then be done in appropriate chapters of the plan. At this point there are several possibilities:

1. Existing environmental knowledge of the proposed development area is adequate enough to show that the proposed development will not cause any adverse environmental influences, and the project can be granted a "negative declaration", meaning no Environmental Impact Report (EIR) is needed.
2. Existing environmental knowledge of the proposed development area is adequate enough to show that the proposed development will cause irreparable harm to the environment, and the developer is shown this information and encouraged to either abandon or adequately modify and resubmit his proposal.
3. Existing environmental knowledge of the proposed development area is deficient in one or more areas. The developer is requested to prepare an EIR in which an especially careful investigation is required in those areas in which the environmental inventory is deficient. Relevant portions of the EIR are then added to the inventory for use in future projects. Meanwhile, the proposed development can either be accepted, rejected, or required to be modified in accordance with the environmental information.

The above review process would work either for projects within the City or for projects outside of the City within Hemet's planning area, with the City of Hemet acting as the County's advisor. In either case, Hemet would be maintaining and building a stock of knowledge about the area and applying the leadership necessary to insure sound environmental decisions. Policies are:

1. The City shall maintain a current environmental inventory of the Hemet area by which development proposals will be evaluated.
2. Hemet should undertake or, where appropriate, encourage County, regional, or state agencies to undertake additional environmental studies to supplement the environmental inventory and analysis of the plan in the near future. They shall include, but not be limited to, the following:
 - a. Archaeological Inventory. This would provide the most feasibly complete inventory of archaeological remains in the area, ranking them in priority categories in order to determine which areas should be preserved.
 - b. Collapsible Soils. A special investigation of this potential problem is warranted and should be carried on in conjunction with a similar investigation keyed to soil problems associated with larger structures within the City of Hemet, particularly in the central area of downtown.
 - c. Sensitivity of Hillsides to Development. Although there does not seem to be evidence of erosion, landslides, or other such problems that might impair or result from future hillside development, there has not been sufficient hillside development by which to evaluate this concern. Hillsides in semi-arid climates, such as Hemet's, typically exist in a precarious balance of soils, vegetation, and runoff. This balance is often upset by development. More information on the sensitivity of Hemet's hills to development is needed.
 - d. Future of Agriculture. Studies need to be undertaken to determine the economic viability of agriculture in the Hemet area and any new crops that might strengthen the position of agriculture, also, of ways in which modified County policies on agricultural preserves and State and County Assessor policies on taxation could help agriculture.

Runoff. Groundwater levels in the Hemet area are largely dependent upon precipitation and runoff from nearby hills for recharge. While groundwater quality and quantities in the area continue to decrease, flood control works and drainage facilities (seemingly necessitated by urbanization) carry local runoff out of the area. The hazards of runoff to property and lives increase as new construction covers open lands. To the fullest extent possible, runoff should be permitted to percolate into the groundwater. Partial concretization of Bautista Creek has already decreased possibilities for groundwater discharge. The need is to protect groundwater recharge areas from development wherever possible. As the Valley develops, flood risks may increase as they have in other areas where urban runoff has been totally channelized. Policy:

1. All proposed developments shall include provisions to allow runoff to percolate back into the ground by live landscaping, dug wells, maintenance of natural drainage ways, and other techniques. These standards shall be regulated through City and County subdivision regulations.

Regional Highways. In terms of regional and inter-regional traffic, Hemet is in a dead-end position. This causes it to escape from the extra environmental burden of having to have through traffic passing through the area, causing added noise and pollution. Through traffic routes also hasten development.

The 1968 plan recommended an east-west freeway to serve Hemet. This would not only cause a decrease in Hemet's environmental qualities, but would add pressures to develop the nearby San Jacinto Mountain area. The same is true for the proposed Bautista Canyon highway which would all but destroy that canyon as an important wildlife habitat. Policy:

1. New regional through routes should be discouraged in Hemet for they will, in general, cause a significant decline in environmental quality. Where absolutely essential, such highways should be routed around important open space and conservation resource areas.

Hillside Development. In order to protect the integrity of the hillsides, the City Council adopted the following Hillside Development Standards on September 28, 1982. (Hillside Development Illustrations are on file with the City Planning Department)

1. Grading is to be minimized in all hillside areas. All final slopes are to be contour graded.

2. Developments shall be designed to follow, or flow with, the natural contours of the site. Natural floodways, drainage channels, slopes in excess of 25% and seismic fault zones should be designed as common open space. Density transfers are permitted in order to compensate for the loss of buildable area, with the general plan determining the appropriate density range.
3. The height of all cut and fill slopes, or combinations thereof, (on a 2:1 slope ratio) shall be no greater than ten feet. Exceptions to this standard are permitted when:
 - A. slope ratios can be increased (i.e., 3:1 or 4:1 or,
 - B. a special landscape terracing plan is approved.

Regional Parks. The regional parks would be supplemented by scenic easements, areas where the development rights are owned by the public. Regional parks are indicated for key open space and conservation areas. These are areas that have significant value for preservation and which can be used for outdoor recreation or educational use by the public. Scenic easements supplement the regional parks system in order to preserve the scenic integrity of the Valley (see section on scenic resources). Policies are:

1. The following new regional parks are recommended (in order of priority):
 - a. Bautista Canyon. This includes the canyon area and the surrounding desert culture environment. It could encompass significant BLM holdings on the hillsides above the canyon. It is expected that use of this park would be oriented towards outdoor education and ecological study.
 - b. Pochea Indian Village Site. An investigation is needed to determine how much of the Pochea Indian Village has been lost to development. Whatever remains should be preserved in a park facility.
 - c. Park Hill. This landmark could be largely preserved by having only the top area as a

park. The lower slopes could continue to develop, following the cove-cluster concept with the middle slopes and the more prominent lower slopes preserved as scenic easements.

- d. Highway 74 Scenic Gateway Overlook. As mentioned, the scenic gateway where one first sees the Valley upon entering the Valley via Highway 74 provides a good place for an overlook area. Coupled with a scenic easement, it would preserve the effect of the regional "entrance-way". The overlook could include viewpoints and information about the area.
 - e. San Jacinto River Parks. These are the same parks as recommended in the 1968 plan. There are possibilities for picnicking, riding, bicycling, and wildlife areas.
 - f. Other Significant Hilltops. These could be preserved in the same manner as Park Hill with lower slopes in scenic easements.
 - g. Simpson Park (existing) and the County Park at Double Buttes (planned).
2. Regional hiking, bicycling, and horse trails are recommended along the San Diego Canal right-of-way, and in the riverbottom area.

Energy Conservation. Moderately high density development is the backbone of many energy-conserving land use objectives. Multi-unit buildings cut space heating and cooling costs more than one-half because units are smaller with fewer exposed surfaces that facilitate temperature exchanges. Dense development makes possible the use of total energy systems that reuse water, solid waste, and waste heat produced from electricity. Energy efficient transportation systems are encouraged by locational choices that reflect higher densities and thereby help to reduce the distance between work and residence. These in turn reduce the length of roads and utility systems. Land zoned for multi-family housing creates an economic incentive for developers to create more dense residential environments.

Modifying height restrictions, cluster zoning, landscaping, street design and reducing lot size requirements are additional steps to encourage more dense development within single-family subdivisions. In lieu of imposing blight, setback, and yard requirements to regulate density in larger developments, the floor area ratio (FAR) can allow greater flexibility in building shape and orientation to optimize energy-conserving features of the natural environment.

The substantial energy savings achieved through higher density development have disadvantages in that they can result in congestions, concentration of air pollution, fire hazards, loss of privacy, increased noise, overburdening of capital facilities, and loss of scenic beauty. Safeguards have to be built into implementation strategies to assume a better product. Design changes and construction improvements should accompany compact development, including better insulation to maximize privacy, use of setbacks, and tiered buildings to allow light exposure and air circulation.

While multi-unit development is not prescribed everywhere and cannot be promoted throughout a community, it can be concentrated near employment and activity centers. Alteration of land development patterns to big recreational and other public facilities closer to their users is another way to reduce energy demand. The development of an integrated pathway system for bicycling, jogging, and walking to complement existing and future road development will also reduce energy consumption. Energy is further conserved by narrowing streets, particularly local streets that serve residents rather than through traffic. They can help reduce the ambient air temperature reducing the use and cost of home air conditioning in the summer. Policies are:

1. The City shall develop energy performance standards by which to review development proposals according to the efficiency of site design, orientation of development, wind protection, ventilation, relationship to open space networks and pedestrian pathways and the use of solar, waste water, and solid waste systems to conserve energy.

City Parks. A few years ago the City considered a set of policies which would measure necessary park and recreation areas according to the population. The proposed regulations stated that four acres of land for 1,000 persons would be required for public park and recreational use, but one and one-half acres of each four acres could be provided by open spaces owned by the School District. This conditions, if met, would delegate responsibility for the provision of two and one-half acres per 1,000 people to the developers.

By establishing these plan standards for open space provision, the City can take full advantage of the Quimby Act. According to the Act, the City may require either the dedication of land or a payment of cash in lieu of such dedication for park and recreational areas, where the subdivider-proposed area will meet a park need. However,

as stated in the Quimby Act, the City cannot require dedication of land or payment in lieu unless it "...has adopted a general plan containing a recreational element, and the park and recreation facilities are in accordance with definite principles and standards contained therein." Policies are:

1. As recommended in the Open Space and Conservation Element (1973), a minimum of four acres of property for each 1,000 persons should be provided in the Southwest Area.
2. One and one-half acres of this four acres/1,000 people may be satisfied by multi-use of school playgrounds located in the Southwest Area, if agreed to by the Hemet Unified School District.
3. Fifty percent of the amount designated as private common open space used for neighborhood park-type uses, up to three acres/1,000 population. (This percentage may be calculated only for that population actually utilizing the private common open space.)
4. Portions of the floodway may be improved and used as open space and may satisfy a portion of the recommended standards as long as walking distances are not exceeded, parks are closely related to residential development, and recreational facilities are approved by the Flood Control District.

Neighborhood-Oriented Parks. Recommended new neighborhood-oriented parks are indicated in Figure 3. These recommendations follow from the analysis of individual neighborhood needs for nearby park facilities (as distinct from community-wide facilities which will tend to draw people from the entire City and its surroundings). Circled notation in Figure 3¹ indicates approximate areas in which parks should be located. Existing, 1990, and 2000 priorities are determined directly from the neighborhood analysis in which the priority needs are presented.

Recommended parks are broken down into two basic types: mini- and neighborhood parks. Mini-parks are either tot lots, playgrounds, sitting areas, or a combination of all three. Neighborhood parks contain sitting areas, tot-lots and playgrounds as well as other facilities. There are no recommendations for new facilities that would be playgrounds alone. The schools already provide playgrounds and the recommended neighborhood parks will usually provide them. In other cities with more grade school children, these types of facilities usually have to be supplemented with playgrounds. In Hemet's case, this is not necessary.

Within each neighborhood the needs analysis indicates

1 See Open Space and Circulation Element, page 34.

approximately where different categories of population live and which areas need new parks; the plan map is more specific. Parks recommended near bicycle paths and park location areas are related to the overall development pattern of the neighborhood. This often means locating a new facility on the developing fringe of a neighborhood area where it will serve existing and the future development. The developing fringe area is usually where vacant land is available.

The tentative downtown renewal plan indicates several street closings for malls and walkways. As mentioned previously, this would provide great open space relief for downtown shoppers, but should be subject to a complete and thorough economic feasibility study. In cases where neighborhoods border or include parts of the downtown renewal area, several sitting areas and tot-lots should be located where they could be integrated with future malls. Downtown parks can and should be integrated with neighborhood parks wherever possible, saving on facilities and encouraging people to use downtown.

In determining the design of specific recommended park facilities, the City should use the park descriptions as only a guide. Amenities to be included in a new park should reflect the specific needs of the surrounding area. Plans should include provisions to alter facilities to reflect the changing needs of new populations. Most importantly, there is no certainty as to the long-range (twenty to fifty years) stability of Hemet as a retirement area. New neighborhood parks in retirement areas probably will not need ballfields, but plans for these parks should indicate where these facilities could go in the future, leaving those areas free of major trees and structures.

In reality, each neighborhood park will not be limited to serving its immediate area. The primary design emphasis for each such park should be to serve the needs of the immediate population. To complement the entire city park system, each park should provide something unique. One park might have a special fountain-wading area, or tennis courts, so that the most complete facilities will be available citywide. This would help avoid the tendency in park design of repeating the same designs in every park.

The architectural designs of new parks should also be people-related and somewhat unique for each park. Standard park furniture found so often in city parks everywhere should be avoided where possible. These styles often run from grey steel and concrete to carnival-style play equipment. Emphasis could be placed on natural materials which most people find more appropriate for parks and which are often cheaper. Particularly important is the choice of play equipment. Modern tot-lot and playground design has

moved beyond the stereotyped facility of the past, where the child's actions and imagination are rigidly controlled by the design of the equipment. New play equipment and facilities emphasize the park as a place for adventure and imagination. Natural materials such as sand, wood, and stone provide the basis for a better child-experience. The City need not limit itself to playground equipment catalogues. It can often make its own equipment cheaper and more interesting. The School District should totally reexamine its playground designs. Policies are:

1. Specific neighborhood needs should be considered in the provision of open space and recreational amenities.
2. Development plans for open space and recreation should provide the flexibility to accommodate changes in the types of facilities to meet the needs of changing populations.
3. While the primary design emphasis for each park should be to the needs of the immediate neighborhood, each neighborhood park should be designed to complement the entire city park system by providing a unique amenity.
4. The following standards shall apply to the location and size of the recreational amenities:
 - a. Sitting area, tot-lot, or Playground one-fourth mile walking distance - may be part of a Neighborhood Park
 - b. Neighborhood Park one-half mile walking distance
 - c. Community Park 15-minutes driving time or within the floodway
 - d. Adults over 60 one-fourth mile walking distance to all passive recreational areas
 - e. Sitting area, tot-lot, or Playground one-half acre or less
 - f. Neighborhood Park 5 to 10 acres

g. Community Park

20 to 40 acres

Bike Paths. The proposed park system and the bike paths would complement each other and should be jointly implemented in newly developing areas. The bicycle paths would be linked to the parks, providing additional resting areas. Policies are:

1. Wherever possible, new parks shall be located where they can be served by the proposed bicycle pathway.
2. The bicycle pathway system should consist of the following elements and each should be studied in terms of its need in the systems:
 - a. Separate lanes for bicycles only.
 - b. Areas where joint use would occur.
 - c. Rest stops for cyclists.
 - d. Signing - directional, regulatory and informational.
 - e. Bicycle parking areas.
 - f. Striping, curbing, and other methods of defining separation from other modes of transportation.
 - g. Off-street or right-of-way bicycle paths.
 - h. Ramps, curb-cuts and other methods of transition between various types and locations of lanes.
 - i. Signals and other devices related to the control of conflict points within the system.

Downtown Plazas-Malls. It is apparent that given the predominant life styles of Hemet, an extensive system of downtown mini-parks and plazas would be popular. The feasibility of plans incorporating downtown mini-parks and plazas should be evaluated in an economic analysis of the downtown retail area, its strengths and weaknesses compared to competing areas, and a determination of what kinds of improvements would significantly increase its retail drawing power. Policies are:

1. Well-lighted park facilities should be encouraged in order to facilitate nighttime use.
2. Recreation hall facilities are encouraged adjacent

to park areas and in areas where private recreation hall facilities are not available.

3. A system of downtown mini-parks and plazas is encouraged as warranted by intensification and expansion of the downtown commercial core.

Urban Fringe. The principal need in the urbanizing fringe area is for inhabitants in those areas to realize the absolute need for a united, locally-based planning effort if the Valley is to be saved from inadequately planned development. As previously discussed, the City of Hemet is the only local agency available to undertake the necessary leadership for the planning job that needs to be done. Incorporation of the principal fringe areas into Hemet would introduce locally-based planning to the fringe areas. Further, the expanded City would represent a greater share of the Valley's population, enabling the City to carry more weight as the County's local spokesmen in future land decisions facing Hemet and the regional area.

New development in the urbanizing fringe area should follow the environmental review procedures and checks discussed earlier. New developments in these areas should also provide for an extension of the Hemet City park system. Hemet's bicycle path system should be extended to all urbanizing fringe areas, and neighborhood-oriented parks located at points along this system where park needs exist. Park locations should follow from the same criteria developed and demonstrated in the Hemet City Plan. Policies are:

1. New development in the urbanizing fringe area should be reviewed for potential environmental impacts based on the environmental inventory and analysis of the Hemet area maintained and impacted by the City.
2. New developments in the urbanizing fringe area should include open spaces that augment the Hemet City park system, provide for the extension of the City bicycle path system, and follow the same locational criteria developed for the City.

Community-wide Park. It appears that while the existing school facilities in the eastern fringe areas are meeting many of the park needs in that area, more park facilities are needed. In addition to several neighborhood-oriented parks (exact plan to be determined through future plans), there is a need for a community-wide facility.

Such a facility is about thirty to forty acres and is aimed at serving the entire community, but specifically the afternoon family outing, the group picnic, the league ball game, or the class outing. It includes expanded neighborhood

park facilities (ballfields, picnic areas, and tot-lots). It can also include other facilities such as nature areas, a museum, and a community center. The community park should be within fifteen minutes driving time of user population concentrations. A need exists for a community park for the following reasons:

- 1) The only local place that is attractive for family outings, group picnics, etc. is Weston Park which is heavily utilized. A considerably larger community park with more diverse facilities would relieve Weston Park, while providing more recreational opportunities.
- 2) The "family" areas, in particular, have too few recreational facilities, particularly for the family and outing type of activity.
- 3) There will be a long-term need in the area for lighted active sports areas. The school grounds cannot adequately respond to this need. Facilities should be designed especially for nighttime use; they were not originally designed for these purposes. There aren't enough school facilities to meet the long-term needs of the area even if the high school and other school ballfields were lighted.

There is also the need in the community for an outdoor educational facility whereby school children and others could study the diverse open space and natural resources of their Hemet area environment. Detailed in this report is the diversity of existing wildlife, vegetation, geology, soils, and land forms, as well as extensive areas of considerable archaeological interest. Unfortunately, many of the nearby areas are not accessible during fire season except to organized and specially approved groups. An outdoor educational facility would provide a place where all residents could learn about and study their environment first-hand.

It would be desirable to locate the outdoor educational facility and community park on the same site. Both would relate primarily to family areas and should therefore be located east of Hemet where there are still large vacant areas for such uses. The park should be owned and operated by the Valley-Wide Recreation District as it will directly serve the fringe area as well as Hemet. Both amenities could benefit through combined use - park users may enjoy a nature trail; school children could use the athletic facilities. The community park could include the following facilities and areas:

- 1) Active lighted sports area
- 2) Picnic area
- 3) Small lake
- 4) Riding and bicycling trails

- 5) Playground
- 6) Multi-purpose community center

The outdoor educational facility could include the following facilities and areas:

- 1) Nature study area.
- 2) Interpretive center for the study of local ecology and archaeology coordinated with use of Simpson Park, Bautista Canyon and the Ramona Bowl Museum.
- 3) Wildlife Lake (could be shared with community park area if adequately designed and maintained for both uses).

Policy:

1. The Valley-Wide Recreation District should be encouraged to provide a community park, equipped with an outdoor recreational facility(ies) and other park facilities that serve the recreational needs of the full range of age groups in residence in Hemet and the urbanizing fringe area.

Implementation

Priorities. The highest priorities of the open space and conservation element are:

- 1) the provision of neighborhood parks in the southern portion of Hemet to satisfy existing needs, and
- 2) the provision of neighborhood parks in the Southwest Area to satisfy future need as the area develops.

The Southwest Area of the City has the largest population unserved by a large neighborhood public open space and the number of people living in that section of the City is increasing. A prime location for a neighborhood park in this area is near the intersection of Stetson and State Streets. As the Southwest Area develops, adequate open space will also be necessary as part of the master plan for development. Of secondary importance are smaller mini-parks, with tot-lots, sitting areas or playgrounds. They are desirable amenities, particularly in existing developed areas of the City to supplement neighborhood park facilities. Community and regional parks have the lowest priority for City action. At present, the Valley-Wide Recreation District for the County is acquiring land north of Hemet near the intersection of Esplanade and State Streets for future development of a 40-acre community park. The City maintains control over development of Sampson Park, a regional facility,

over 450 acres of vacant land five miles southeast of the City. The City Parks and Recreation Department submitted a five-year development plan to the Bureau of Land Management (BLM) to provide water to the site and improve access and minor improvements.

Program of Action. These programs and actions establish a means of guiding the development of open space and conservation areas. They help build a stronger consciousness for the preservation of valuable natural resources and the pursuit of well balanced growth. Implementation of the plan requires both public and private initiative and cooperation, employing a variety of implementation techniques. The actions described below are organized by regional, city, and fringe planning areas.

The implementation strategies for the City and urbanizing fringe area are combined to further encourage the same planning approach in both areas. Those actions that are related to the acquisition of neighborhood open space are highlighted (*) to indicate priority areas with direct action for the City and the private sector.

1. Hemet should assume its role as the leading voice of local people for the entire planning area. The planning staff should be increased to where it could undertake the necessary studies of establishing and updating a broad base of environmental knowledge and information about the area as outlined in the plan.
2. The City should expand its role as advisor to the County and the Valley-Wide Recreation District in their impact on issues affecting the planning area.
3. The proposed regional parks should be accomplished over the years, principally through federal, State and County resources.
4. The proposed scenic easements should be encouraged through the utilization of a Planned Unit Development Zoning Regulations and Hillside Density Transfers.
- *5. In order to encourage the provision of private and public open space as part of private development (to help meet the overall need for open space and recreational facilities), the City encompasses the adaption of flood control channels and floodways in private developments for multi-purpose use as open space and recreation.
- *6. The City shall continue to encourage the use of

the "Park Subdivision" ordinance which provides for private open space by permitting a higher density than would normally be allowed. The open space and recreation requirements as per ordinance, are as follows:

Community recreation and service areas containing clubhouse, recreational area for outdoor games and activities such as shuffleboard, horseshoes, putting greens and swimming pool, shall be shown on the plans and specifications. Location and size of all facilities indicated in this paragraph must be approved by the Hemet Planning Commission and the Hemet City Building Department. There shall be a minimum of 270 square feet per lot of recreation area, exclusive of any lot, provided within the park subdivision. The clubhouse shall have a floor area of not less than twenty-five (25) square feet per residential lot, and shall include adequate kitchen, restroom and storage facilities therein.

- *7. The City shall continue to encourage the use of the special zone for mobile home subdivision known as the TR-20 zone and the mobile home park zone requiring the same basic community recreation facilities as the park subdivision.
8. The City shall continue to review all new development proposals in both urbanized areas and undeveloped areas to provide for the conservation and enhancement of the environment and to insure that sites are developed with due regard for the aesthetic qualities of the natural terrain and landscape and that trees and shrubs are not indiscriminately destroyed.
9. Formulate a joint-use agreement with the Hemet Unified School District for use of their park system.
10. Adopt zoning regulations for large lot zoning in existing agricultural areas to help preserve visual open space in agricultural uses.
11. Adopt an ordinance to allow no subdivision of hillside lands in parcels smaller than the adjoining lots.
12. At such time that downtown redevelopment is considered, the redevelopment law can be used to encourage the provision and integration of downtown park facilities within the total park system.
13. The City should work with the Valley-Wide Parks and Recreation District on the programming and

design of the community park to ensure that it is integrated into the City open space and park system and meets the needs of the Hemet area.

- *14. The City should rewrite the subdivision ordinance to consolidate park and recreation fees.
- *15. The City should investigate and establish means to supplement the present development fee for public open space, including an increase in development fees, development excavations, and incentives, the use of open space easement and funding from County, regional, State, and federal sources.
- *16. The City shall require each developer to identify in the development plan all slopes above 25 percent for the purposes of protecting hillsides beyond 25 percent slope.

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SEISMIC AND PUBLIC SAFETY ELEMENT

GOALS AND POLICIES

Goals for Hazard Reduction

To plan effectively for reducing hazards to acceptable levels of risk it is necessary that goals be set and adhered to. They should be modified as needs change and constructs of "acceptable" levels of risk change. As used here, the goals address general policy directions which form the basis for planning decisions and actions. The following are goals for hazard reduction in the City of Hemet:

- 1) To minimize injury and the loss of life from fire and natural hazards.
- 2) To minimize social and economic dislocations resulting from fire and natural hazards.
- 3) To minimize damage to public and private property resulting from fire and natural hazards.
- 4) To provide for the rapid restoration of services following a major disaster.

Policies

The following policies complement the planning goals and define specific directions for the City to take in reducing fire and natural hazards:

- a) Provide for the identification and evaluation of existing structural hazards, as well as hazards in transportation networks and water supply systems.
- b) Provide for orderly hazard reduction programs to reduce risks associated with hazardous structures to acceptable levels.
- c) Promote and encourage the development of more detailed scientific analyses of natural hazards in the Hemet area, such as, faults, fault zones, areas subject to subsidence, and areas of slope instability.
- d) Provide for the education of the community regarding the nature and extent of natural hazards such as, fires, floods, and earthquakes.
- e) Continue to condition new developments as a response to potential natural hazards.
- f) Provide for the periodic review and updating of this Element.
- g) Provide for the maintenance and upgrading of disaster response plans.
- h) Undertake the preparation and ultimate adoption of a Master Drainage and Flood Control Element of the General Plan.
- i) Require incremental storm runoff resulting from new construction to be impounded on site. (This is considered an interim policy dependent on completion of "h" above).
- j) Ensure that new development in a federally designated floodway or floodplain will provide for the mitigation of any potential flood damage.
- k) Ensure that fire stations and other emergency facilities are provided in any large scale development where such facilities are warranted to retain an overall five minute response time.
- l) Coordinate with the County of Riverside and the State Department of Forestry to establish a Cooperative Fire Combat Training Center.

Specific Actions

The implementation of the following specific actions, on the part of the City, are deemed necessary to the fulfillment of the above stated goals and the carrying out of the above policies.

Building Codes and Inspections. Presently, the City requires soils engineering and geological engineering investigations in areas of moderate and high landslide risk and in potential liquefaction and subsidence areas. To insure adequate review and full use of investigation reports, the City should, when necessary, retain a part-time engineering geologist-consultant. In addition, the City should amend Chapter 23, Section 2314 (Earthquake Regulations) of the Uniform Building Code to account for the

expected maximum ground accelerations of the recommended design earthquakes. Amending section 2314 involves revising the basic lateral force equation in the section, and requires analysis by a qualified structural engineer. The intent of the revisions is to reflect the levels of acceptable risk adopted in this Element.

Structures within the study area of this report will be inspected for conformance with the amended Uniform Building Code earthquake regulations. Inspections will be conducted according to the following priorities:

- 1) emergency service facilities (e.g., fire and police stations, hospitals, disaster centers, communication centers).
- 2) other critical facilities (e.g., schools, utility and water lines, government buildings).
- 3) high occupancy non-critical facilities (e.g., dormitories and apartments).
- 4) normal or limited occupancy non-critical facilities (e.g., offices, low density residential structures).

Within each priority group, the facilities built before 1933 will be inspected first, then those built between 1933 and 1948, and lastly, those constructed after 1948. The significance of the year 1933 is that the Field and Riley Acts became law in California that year and required reinforcement in schools and certain other structures (see Appendix B). Structures built before 1933, especially larger commercial structures, are more likely to be unreinforced masonry block buildings which are most susceptible to collapse in earthquakes. In 1948, earthquake regulations were adopted as a legally binding section of the UBC for the first time. Previously, earthquake standards were set forth in the Appendix of the UBC and were not a mandated part of the Code. It is more likely, then, that a building constructed before 1948 would be less able to withstand the shock of an earthquake than one built after 1948. Public structures should be inspected before private structures.

Table 3 of the Seismic and Public Safety Element will be used as a general indicator in older construction for use in establishing a priority ranking system for evaluating structures. Buildings with a high susceptibility to damage rating (five or over) will be selected for structural inspection before those with low ratings. A high priority will be placed on establishing a definition of facilities that handle explosive, flammable, or toxic materials and on an evaluation of their seismic vulnerability.

Caltrans will be requested to review its facilities and roadways within the study area to determine the potential impact of expected earthquakes and to forward comments to the City.

Hazards will be identified and plans for reduction of hazards will be requested by the City. The Circulation Element of the General Plan and potential evacuation routes will be reviewed and updated as necessary.

The Atchison, Topeka & Santa Fe Railway Company will be requested to review its lines and yards within the study area to determine the potential impact of the expected earthquakes and to forward comments to the City. Hazards will be identified and plans for reduction of hazards will be requested by the City.

The City of Hemet will request the California State Division of Dam Safety to require the owners of any existing dams adjacent to the City to inspect their dams using the seismic response spectra as guidelines to determine these structure's ability to withstand expected earthquakes.

The Southern California Gas Company and the Edison Company will be requested to inspect their facilities and distribution/transformation networks and centers to determine the potential impact of expected earthquakes and to forward comments to the City. Hazards will be identified and plans for reduction of hazards will be requested by the City. These utilities should also review their gas and power lines for potential fire hazards in the event of an earthquake. Contingency plans will be formulated to provide for the restoration of power in the event of a major disaster.

The Eastern Municipal Water District and the Lake Hemet Municipal Water District will be requested to inspect their facilities and distribution network to determine the potential impact of expected earthquakes and to forward comments to the City. Hazards will be identified and plans for reduction of hazards will be requested by the City. Contingency plans will be formulated to provide for the restoration of water in the event of a major disaster.

Hazardous Structures. Structures identified as not conforming to amended earthquake standards or as hazardous in terms of fire or flooding will be brought into conformance with acceptable levels of risk by programs including, but not limited to, structural rehabilitation, occupancy reduction, and demolition and reconstruction. The City will develop standards that will enable critical and essential structures or facilities to remain functional.

The City will review and consider the desirability of initiating condemnation proceedings against structures found to be unsafe. The City will advocate the expansion of State and Federal relocation assistance funds and programs to aid persons and businesses displaced from hazardous buildings. The need to replace or upgrade public buildings should be reflected in capital improvement programs and plans for the affected agencies.

Research and Plan Review. The City will encourage and support further detailed field study of the San Jacinto Fault Hazard Management Zone, including sub-surface trenching to provide a more refined evaluation of the surface rupture potential of the fault. Such studies may be undertaken by local government, private enterprise, or institutions of higher learning and research. In any case, the staff geologist of the County Planning Department will be notified in advance of subsurface work to secure his evaluation of fault activity and location during the trenching phase when feasible.

The City will also require site-by-site soils and geologic engineering studies for proposed development projects in areas of moderate to high landslide risk to assess natural and graded slope stability. Slope stability calculations will incorporate the ground shaking parameters presented in the County technical Report on seismic safety and safety. In addition, the City will require site-by-site soils and geologic engineering studies in areas of potential settlement and evaluate these potential hazards using the ground shaking parameters presented in the County technical report. The City will institute a building strong-motion instrumentation program for buildings over four stories in height, if such buildings are anticipated.

The City will encourage the completion of flood control studies and projects that would serve to mitigate flood hazards that may effect the City. This would include the completion and implementation of the Master Drainage and Flood Control Element of the General Plan.

Upon adoption of the Seismic Safety and Safety Element, the City administrative staff will oversee the implementation of the Element and advise the Council of implementation progress. This Element will be reviewed by the City of Hemet Department of Community Development annually and will be comprehensively revised every five years, or whenever substantially new scientific evidence becomes available.

Land Use Regulations. No development will be permitted in the San Jacinto Fault Hazard Management Zone until a detailed geological evaluation of the surface rupture potential of the fault is completed and adequate building setbacks from the fault are established. The Riverside County Planning Staff Geologist will be required to evaluate all building setback recommendations and establish geologic guidelines for construction adjacent to active faults.

No development will be permitted in any seismic zone unless it conforms to the revised Uniform Building Code Earthquake Regulations. All emergency and critical facilities will be designed to withstand the maximum earthquake appropriate to

the use of the structure. Local emergency and critical facilities will be located as far removed from seismic zones as practical, while still serving the area. In addition, no development will be permitted in areas of high or moderate landslide risk without a required slope stability investigation at the site level.

Fire Prevention. The City should coordinate with the County of Riverside and the State Department of Forestry to establish a Cooperative Fire Combat Training Center. Hemet-Ryan Airport should be considered as a location for the Center.

Population and growth should be monitored by City Staff to determine the location for new fire substations well in advance of actual needs. Acquisition of new fire substation sites will be coordinated with the approval of development that will require fire protection beyond the safe capabilities of existing fire stations.

Fire prevention specialists should be added to the Fire Prevention Bureau to provide for the expected increase in plan checks and for increased technical inspections and coordination with administrative staff and police in upgrading and improving the City's Disaster and Emergency Response Plan. This would help, also, in improving the City's weed abatement program.

In cooperation with the local school district, the City will initiate educational programs in lower grades using displays and demonstrations that will expose younger children to the nature and strength of fire. Such programs will tend to replace their natural curiosity with a degree of knowledge. The City will support or sponsor exhibits and presentations in secondary schools which demonstrate the more involved aspects of fire dynamics, i.e., major contributing factors to fire hazard and the relationship of fire to the natural ecology. Encourage parental cooperation and assistance in overall fire education programs.

Disaster Preparedness

Major emergencies or disasters require the activation of the City's emergency operations plan that provides for a direction and control staff functioning at the primary emergency operating center located in the Police Department Building located at 210 North Juanita Street. In the event the primary center is not habitable, the operating staff will form and function from an alternate facility located at the Administrative Building at the Farmers Fairgrounds located at 100 South Palm Avenue.

Upon declaration of a local emergency, by duly constituted authority, or declaration of a state of emergency by the Governor of California, the organization of city government is changed

to provide the extraordinary powers necessary to respond expeditiously to the emergency. The City Manager will assume the role of Emergency Corps Commander; in his absence a line of succession has been placed under the command of the Emergency Corps Commander. In accordance with local, state, and federal statutes, the Emergency Corps Commander will be responsible for all operations within the City and for coordination/response to lateral and higher authorities.

The principal objectives of the disaster response program for the City of Hemet are:

- a) to save lives and protect property;
- b) to provide a basis for direction and control of emergency operations;
- c) to provide for the continuity of government;
- d) to repair and restore essential systems and services (e.g., emergency water supplies);
- e) to provide for the protection, use, and distribution of remaining resources;
- f) to coordinate operations with the civil defense emergency operations of other jurisdictions;
- g) to provide for a maximum degree of self-sufficiency by the City in the event of a major disaster;; and
- h) to prevent rumor and general panic and to restore calm to the population.

Emergency First Aid and Rescue

Emergency first aid services are provided to all citizens of the City. This function is integrated into the Fire Protection System. Upon request for emergency first aid, the closest engine company is dispatched, with notification to the local ambulance service for ambulance follow-up. All transportation of the injured or sick persons is handled by the Hemet Valley Ambulance Service located within the City.

Rescue services are also integrated into the Fire Protection System, such as traffic accidents requiring extraction, cave-ins, and machinery entrapment. Major type rescues such as collapsed buildings may require response to specialized equipment from the City Public Works Department or in some instances, equipment from private contractors.

SCENIC HIGHWAYS GOALS AND POLICIES

Scenic Highway Goals

The following goals represent the overall results desired of the Scenic Highways Program. They are intended to form the framework for decision-making by the City. These goals are interpreted in more detail by a number of policies. Finally, suggested action programs are included for implementation of this element. Some of these action programs are already in existence with the primary purpose intended in this element to reinforce these programs where they relate to this element. The suggested goals are as follows:

1. To consider informal local scenic routes that will increase the enjoyment of a variety of transportation modes, including bicyclists and pedestrians as well as automobiles.
2. To protect and enhance scenic resources within these specified areas.
3. To promote the utilization of landscaped setbacks in designated areas to increase the scenic resources in the City.

Policies and Action Programs

Policy 1. Procedures for designating a Scenic Preservation Overlay Zone should be completed for all scenic routes so designated by the City.

Action Program 1. A draft Scenic Preservation Overlay Zone should be prepared by the Planning Department for the purposes of implementing goals and policies contained in this element. e.g. landscaped setbacks along all scenic routes

Policy 2. The City should consider establishing landscaped entry points into the City.

Action Program 2. In addition to searching for sources of funding for this measure, developments occurring adjacent to these areas should contribute to their implementation.

Policy 3. Ordinances which require the amortization and removal of nonconforming signs shall be strictly enforced.

Action Program 3. The City of Hemet Sign Ordinance shall be strictly enforced.

Policy 4. The size, height, and type of on-premise signs should be the minimum necessary for the identification, and the design, materials, colors, and location of the

signs should blend with the environment, utilizing natural materials where possible and feasible.

Action Program 4. The City of Hemet Sign Ordinance should be strictly enforced.

Policy 5. Offsite outdoor advertising displays shall be controlled and nonconforming signs should be amortized and removed.

Action Program 5. The Hemet Sign Ordinance shall be strictly enforced regarding billboards and offsite advertising.

Policy 6. Trees and other roadside planting should be utilized to protect and enhance the view from the road; protection or enhancement of the scenic qualities should be the primary consideration in any proposed removal of mature trees or shrubs.

Action Program 6. A tree planting and landscaping program should be investigated for all scenic routes as part of the Scenic Preservation Overlay Zone.

Policy 7. The feasibility of incorporating riding, hiking, and bicycle trails and other compatible public recreation facilities within the scenic corridor should be investigated.

Action Program 7. Wherever possible, riding, hiking, and bicycle trails should be incorporated in scenic corridors as part of any new development proposals.

Policy 8. The City should consider the adoption of an informal scenic highways program as established by this element. Maximum citizen participation should be utilized with each step of the program.

Action Program 8.1. A Master List of Eligible Routes within the City and its Sphere of Influence Area should be prepared by the Planning Staff and included as part of this element for consideration by the Planning Commission and the City Council. Periodic review of this list for possible additions or modifications should be required.

Action Program 8.2. A corridor study for each of the routes contained in the Master List shall be prepared by the Planning Department. If this study shows the route is worthy of inclusion in the program, then the Scenic Preservation Overlay Zone should be applied.

Policy 9. The City shall coordinate its scenic highways program with State, County, and adjacent cities wherever possible.

- Action Program 9. The City shall solicit and utilize input from other governmental jurisdictions as well as input from property owners, civic groups, and other concerned citizens, in the preparation of corridor studies.
- Policy 10. The City shall seek financial assistance from Federal, State, and County sources whenever the expenditure of funds is necessary for implementation of this element.
- Action Program 10. All funding sources or grants available for scenic preservation will be investigated by the City Staff.

CIRCULATION ELEMENT
GOALS, OBJECTIVES AND POLICIES

The goals for the Circulation Element of the Hemet General Plan were derived primarily from a questionnaire administered to the citizens of Hemet in 1978, as discussed in the Circulation Element, page 7. The following goals therefore are viewed as representing a broad consensus of the community regarding transportation facilities.

Goals and objectives

Goal: To develop an efficient, safe, and effective transportation system which is integrated with the future land use pattern of Hemet and responsive to the travel aspirations of its citizens.

Objectives:

1. Develop a circulation network adequate to serve Hemet's planned land uses.
2. Develop a circulation plan sufficiently flexible to accommodate short term improvements while maintaining the integrity of the long range plan.
3. Establish a policy aimed at improving the existing street system in conjunction with new land use development to assure adequate system capacity.

4. Develop a policy that will enhance circulation in the CBD in lieu of accomodating further urban sprawl.
5. Formulate a policy to maintain the integrity of the adopted master plan of highways by securing the designated rights-of-way when new land development is approved.

Goal: To develop a transportation network that is financially, politically and technically possible to implement.

Objectives:

1. Develop a circulation plan that is compatible with planned networks for adjacent jurisdictions.
2. Develop a policy of obtaining citizen input in all aspects of transportation and land use planning and development.
3. Maximize the use of available Federal, State and local (Riverside County) funds and subsidies in the planning and implementation of the adopted circulation element.

Goal: To develop a circulation system that reflects the special needs of the transit dependent.

Objectives:

1. Develop a policy aimed at monitoring the needs of the transit dependent and implement service improvements when feasible.
2. Encourage the continuation and use of demand responsive public transit (Dial-a-Ride).
3. Devise a circulation system that integrates the car, bicycle, and public transit into a compatible, balanced, multi-modal system.

Inevitably, conflicts will arise in the specific applications of these goals and objectives to the planning process. Goals and objectives also need to be updated periodically, as the needs and attitudes of the community change.

Circulation System Policy Recommendations

Based on the findings and projections as contained in Sections IV and V of this report a number of recommendations about the future shape of Hemet's circulation system, as well as for the adoption of policies to guide development for that system, can be made. In the following section, recommendations are first made about appropriate changes to the Hemet-San Jacinto General Plan of Highways. This is followed by a number of policies recommended for adoption in regard to the city's road system. Finally, several policy recommendations in regard to bikeways and public transportation are discussed.

As a general planning rule, it is highly desirable that plans for adjoining jurisdictions be compatible with each other. In the case of Hemet, separate circulation plans have previously been prepared for both Riverside County and the Hemet-San Jacinto region. Not unexpectedly, there are a number of discrepancies between these documents. Since the Riverside Plan is much the more recent (1980), it would perhaps be most appropriate if Hemet's street plans are compatible with this document whenever possible. In some cases, however, local traffic projections indicate that the Riverside County plans would be inadequate to handle anticipated traffic. Therefore, the changes necessary for local plans to conform to the Riverside County Plan are subdivided into those recommended for adoption by the city and those where such conformity would not be favorable in light of anticipated traffic.

Recommended Changes:

- 1) change the designation of Menlo from a major to a secondary highway;

- 2) extend Whittier Avenue as a secondary highway from Palm westerly to Sanderson;

- 3) change Warren Road from a major to a secondary highway;

- 4) designate Fisher as a secondary highway to the southern city limits;

- 5) extend Palm Avenue as a secondary highway from Stetson to the southern city limits;

- 6) designate La Tierra (planned) as a secondary highway from Palm to San Jacinto;

- 7) designate Cawston as a secondary highway from Harrison to the northern city limits;

8) extend Simpson as a major highway eastward to Lyon, and as a secondary highway eastward to State (formerly the planned extension of Harrison Street).

Not Recommended:

1) change the designation of San Jacinto north of Florida from a major to a secondary street;

2) change the classification of State Street north of Florida from a major to an arterial highway (not needed under the adopted Hemet-San Jacinto classification system);

3) change the designation of Stetson Avenue from a major to a secondary highway.

It should be noted that the Riverside County Highway Plan, because of the larger scale at which it was drawn, does not include all streets which are shown on the 1968 Hemet-San Jacinto Master Plan. This cannot really be considered a discrepancy which must be changed, but should simply be viewed as a difference that is the natural outcome of the scale at which the plans are made.

In terms of streets that are included only on the Hemet-San Jacinto General Plan, several changes are also recommended. These changes are necessary to accommodate the system of planned one-way streets, or to accommodate anticipated traffic levels in 1990, as follows:

1) extend Devonshire Avenue as a secondary highway easterly to Columbia;

2) extend Acacia Avenue as a secondary highway westerly to Florida; and

3) upgrade the designation of San Jacinto Street between Florida and Whittier from secondary to major highway.

Circulation Policies

The aim in establishing circulation policies is to satisfy the stated goals and objectives of the community served by the transportation network. The network should be designed to provide a framework for land uses, reinforcing the neighborhood concept of development. The objective is to create a hierarchical system of circulation comprised

of major and secondary highways which accomodate through traffic, collectors which provide for circulation within the neighborhood, and local streets which provide for access to individual lots. The ultimate goal of these policies is to develop an efficient, safe and effective transportation system which integrates the car, bicycle and public transit into a compatible, balanced, multi-modal circulation system that is responsive to the desires and aspirations of the community it serves.

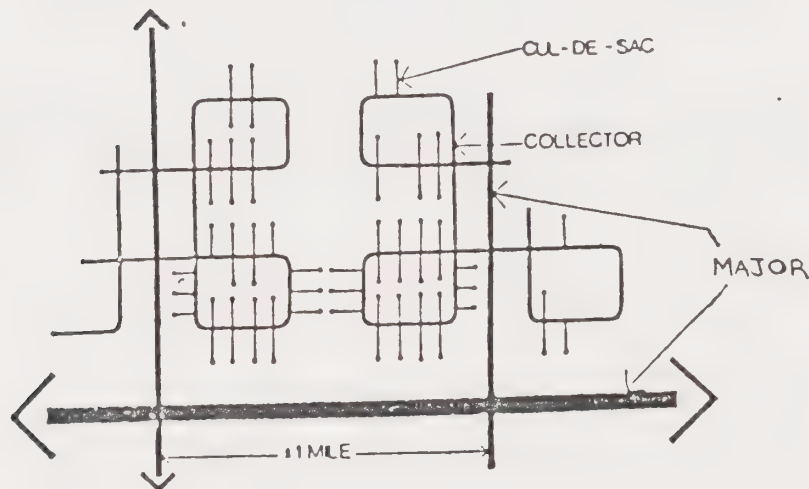
The policies listed below are meant to be a general guide in future planning. If they are followed, they will help the community toward achieving its transportation goals and objectives. These policies should be evaluated and updated periodically in response to changing conditions in the community.

1. Short term transportation improvements should maintain the long range integrity of the ultimate master plan of highways.
2. The existing street system should be improved in conjunction with new land development according to adopted City standards.
3. New land development should involve dedication of the necessary right-of-way established by the adopted master plan so as to maintain the integrity of the ultimate circulation system.
4. Adequate traffic circulation and access should be provided and maintained within the Hemet Central Business District.
5. The recommended system of one-way streets in the CBD and the parking recommendations should be adopted, and the one-way system should be extended to the eastern and western City limits along Acacia and Devonshire to accomodate 1990 traffic levels in the Florida Avenue Corridor.
6. Where there is no conflict with local projected circulation needs, the compatibility between the Riverside County and City of Hemet Circulation Elements should be encouraged.
7. Control of access should be maintained to facilitate smooth traffic flow (if possible, at the "C" level) and increased traffic capacity and safety.
8. Major or secondary highways, in general, should be one mile apart, but greater spacing should

be permitted where low-intensity land uses exist.

9. Intersections on major and secondary highways should be spaced at quarter mile intervals, at a minimum.
10. Commercial driveway access shall provide adequate distance from intersections, as stipulated by accepted engineering practices.
11. Residential access shall be restricted on major and secondary highways.
12. Through traffic in neighborhoods shall be discouraged by creating discontinuities in the local street system, intersection offsets, circuitous street configurations, and cul-de-sacs, as illustrated conceptually below.

HIERARCHICAL STREET PATTERN



13. Local and collector streets shall link with secondary and major highways and shall provide for intra-neighborhood circulation.
14. Access to non-residential traffic generators, such as schools, recreation centers, and shopping centers, shall be provided from a collector, secondary or major highway, to minimize traffic on local residential streets.

15. Local neighborhood streets shall be designed to discourage unsafe driving practices, such as speeding, through the use of curvilinear streets or other techniques.
16. Pedestrian-vehicle conflicts shall be minimized through the use of cul-de-sacs, looped streets, or special pedestrian walkways between major traffic generators.
17. Neighborhood intersections shall be minimized.
18. Streets shall intersect at 90 degrees, or as close to 90 degrees as possible, for better traffic control and safety.
19. Reasonable public transit vehicle requirements, such as adequate turning radii, street widths and intersection design shall be met in neighborhood street design.
20. Citizen input in transportation planning and development matters shall be encouraged to insure that the goals and desires of the community are considered when decisions are made relating to circulation improvements.

The following policies in regard to bikeways and public transportation services are also recommended:

1. In line with current Caltrans policy, Class I bikeways shall not be considered feasible except under unusual circumstances.
2. Where space permits, Class II bikeways (bike lanes) should be provided along secondary and major highways, and along lesser streets if necessary to assure system continuity and service to all major traffic generators.
3. Bicycle support facilities, such as drinking fountains and rest areas, shall be provided at community parks and elsewhere, if economically feasible.
4. To accommodate the anticipated increased use of the adult tricycle, all Hemet bikeways shall be constructed to standards which will allow for the safe operation of such vehicles.
5. Demand-responsive public transit (Dial-a-Ride) shall be encouraged. Where practical, small

vans or buses should be used. If existing public subsidies for such services are cut, every effort should be made to make local subsidies available.

6. Taxi service shall be encouraged in order to provide additional mobility to those without automobiles or a valid license.
7. If the Santa Fe railroad line through Hemet is abandoned, efforts should be directed at obtaining the right-of-way for alternate uses, such as a bicycle path, and/or for CBD redevelopment. State funds should be sought for this.
8. If transit patronage warrants, and if economically feasible, fixed-route service should be implemented. In that case, demand-responsive and para-transit services should be encouraged to provide supplementary service.
9. If the community desires, commuter air service (passenger and freight) to Los Angeles, using modern, quiet airliners, should be encouraged.
10. Common carrier truck service should be encouraged in order that local industries maintain good access to the national economy.

I V

LAND USE ELEMENT
POLICIES AND PROPOSALS

LAND USE ELEMENT POLICIES AND PROPOSALS

Introduction

The land use policy for the Hemet planning area is set forth in the accompanying map of proposed land uses. This map includes the proposed land uses by type, and includes a breakdown of residential density ranges deemed appropriate for various locations. Land uses are indicated by color, as indicated on Table 5.

The proposed land use map is not a zoning map. The land use categories are general rather than specific, and they are intended only to suggest appropriate uses rather than specific requirements such as dwelling types, setbacks, height or lot coverage. The zoning process is seen as the implementation process for the land use policy set forth in this plan. Urban design policies are also not a part of the land use plan. Certain design elements are covered in the zoning regulations, particularly with respect to the PCD zoning districts. The consultants also recommend that a Community Design element be undertaken by the City of Hemet, for reasons stated below.

The two unincorporated settlements of Winchester and Valle Vista are situated within the Hemet planning area, but they are not included on the proposed land use map. In order to maintain the integrity of these areas, planning for them should be undertaken in a separate study from this area general plan, to be developed with input from residents of the respective communities.

Key points of the proposed land use map

The proposed land use map is intended to be self-explanatory regarding the distribution of land uses in the planning area. Several points of particular note in interpreting the map are outlined here.

Existing land uses are included on the map as desirable land uses in several cases. This is only true where the existing building stock is in good repair, thus precluding any necessary major reconstruction in the near future that could change the character of the district. Several subdivisions close to the center of the city are included as proposed land uses for this reason.

Undeveloped land designated "Specific Plan" shall require the preparation of a Specific Plan pursuant to Section 65450 of the California Government Code (Title 7, Division 1, Chapter 3, Article 8).

The following Specific Plan policy outline shall be utilized for processing (in addition to the requirements of Section 65450 above):

Undeveloped land designated "Specific Plan" shall require the preparation of a Specific Plan pursuant to Section 65450 of the California Government Code (Title 7, Division 1, Chapter 3, Article 8).

The following Specific Plan policy outline shall be utilized for processing (in addition to the requirements of Section 65450 above):

SPECIFIC PLAN PROCESSING

1. City Council initiates the Specific Plan study and E.I.R. preparation (if appropriate)
2. Analysis - constraints and opportunities (Developer and Staff)
 - Send out Notice of Preparation for E.I.R.
 - Compliance with General Plan
 - Utilities
 - Access
 - Surrounding Land Use
 - Topography
 - Flood Control/Drainage
 - Services
 - Developer conducts and analyzes market surveys
 - Schools/parks (dedication)
3. Developer formulates concept and preliminary Land Plan based on analysis. Begin E.I.R. preparation.
4. Preliminary Staff Review of Plan to analyze which existing City zones/development standards will accommodate Plan and where zones/development standards may need to be modified to provide flexibility for overall Specific Plan. Staff input on current City Council policies or Resolutions which apply to the Plan.
5. Generate basic Specific Plan (Developer)

Land Plan

- location of uses and circulation
- density
- zoning (if appropriate)

Text (Contents per Section 65451 Government Code)

- General objectives/concepts
 - Tabulation of land use by area
 - Tabulation of general density and Land Use
 - Development standards for the location and regulation of buildings, related accessory features and Land Uses (zoning)
 - Location and standards for circulation
 - Open space/recreation
 - Ownership
 - Maintenance
 - Utilities concept plan
 - Community facilities/services
 - Phasing
 - General guidelines
6. Follow E.I.R. Procedures
 7. Planning Commission public hearing
 8. City Council public hearing/adoption
 9. Implementation

Table 5: Land Use Plan Designations

<u>COLOR</u>	<u>PROPOSED LAND USE</u>	
<u>Open Space</u>		
Dark green	Open space preserve, hillside natural area	
Medium green	Existing park, golf course, cemetery, and proposed urban open space. "N" designates proposed neighborhood park.	
Light green	Agriculture	
<u>Residential</u>		<u>Dwellings per net acre</u>
Light yellow	Low density, rural estate	Up to 2
Medium yellow	Low density, single family	Up to 7
Orange	Low medium density	Up to 17
Brown	Medium density	Up to 40
<u>Commercial and Industrial</u>		
Violet	Professional Office	
Red	Neighborhood commercial and commercial recreational	
Pink	General Commercial	
Blue	Industrial	
<u>Public, quasi-public, and private utilities</u>		
Grey	"C" Civic and community center	
	"F" Fire station (F = proposed)	
	"H" Hospital (existing)	
	"L" Library (existing)	
	"A" Airport and related uses	
	"E" Elementary school (existing; E = proposed)	
	"J" Intermediate school; J = proposed	
	"HS" High school	
Blue-grey	Major flood control channel or aqueduct	
Purple	Church	

GENERAL PLAN LAND USE/ZONING COMPATABILITY MATRIX

Zoning

	A AGRICULTURE	R-A RESIDENTIAL - AGRICULTURE	R-1-6	R-1-8	R-2 DUPLEX	R-3 MULTI- FAMILY	R-P RESIDENTIAL PROFESSIONAL	POD PLANNED COMMUNITY DEVELOPMENT	S-1 COUNTRY CLUSTER	TR-20 MOBILE HOME SUBDIVISION	TPO	PUMH PLANNED UNIT MOBILE HOME	SR-3 SENIOR APARTMENT	C-1 NEIGHBORHOOD COMMERCIAL	C-2 GENERAL COMMERCIAL	C-M HEAVY COMMERCIAL	M-1 LIMITED MANUFACTURING	M-2 MANUFACTURING
Agriculture	*								*									
Residential I (up to 2 du/a)	*	*							*									
Residential II (up to 7 du/ac)	*	*	*	*				*	*	*	*	*						
Residential III (up to 17 du/ac)	* H	*	*	*	*	*		*	*	*	*	*	*					
Residential IV (up to 25 du/ac)	* H	*	*	*	*	*		*	*	*	*	*	*					
Residential V (up to 30 du/ac)	* H 5 ac +	*	*	*	*	*		*	*	*	*	*	*					
Residential VI (up to 40 du/ac)	* H 5 ac +	*	*	*	*	*		*	*	*	*	*	*					
Professional Office	* H 5 ac +		*	*	*	*	*		*									
Neighborhood Commercial	* H 5 ac +						*		*					*				
General Commercial	* H 5 ac +													*	*	*		
Industrial	* H 5 ac +															*	*	*
Park/Golf Course Etc.								*										
Open Space Preserve Hillside Natural Area	* 2 ac min							*										

** NOTE:

H = Holding Zone (Interim Zone)
Maximum site density is determined by
General Plan Designation, not Zoning

General
Plan
Land
Use

- The proposed land use map was developed on the basis of existing land uses, unless they were deemed inappropriate. Undeveloped areas currently surrounded by urban uses are shown as urbanized on the map. Gradual transitions between land uses have been indicated where possible, in order to present an orderly growth pattern.

- All proposed industrial land is situated in the vicinity of Hemet-Ryan Airport or along the Santa Fe railroad right of way. Commercial uses are proposed on major arterial streets. In Hemet, it has been observed that the usual need for convenience shopping near residential districts is not present, since persons tend to blanket the planning area for shopping purposes. As the city expands, however, this need for convenience shopping in proximity to residential districts may become more pronounced. Thus the proposed land use map indicates convenience shopping centers in the northwest and southwest sectors.

- Except for the proposed Salt Creek drainage channel, only the existing drainage channels are shown on the proposed land use map. The location of future channels will be determined as part of the flood control and drainage element now under preparation.

- In the southwest sector, adopted specific plans have been incorporated into the map of proposed land use, since they have been adopted as public policy. However, it is understood that some of these areas may require replanning. If this replanning is undertaken, the general plan itself will have to be amended before new planned community development plans are approved.

- The map includes a spectrum of residential density, residential types (as single and multi family), and land uses. Full development of the southwest area could contain a population of 20,000 persons.

- In the northwest area, proposed densities range from low density residential to rural estate, agriculture and open space. The area has thus been planned to provide a transition from rural, agrarian uses to low intensity urban uses.

- The Diamond Valley area which straddles State Street and Newport Road is shown as an urban reserve on the proposed land use map. When urban development is to occur, the area should be master planned jointly by the City of Hemet and the property owners. Such a master plan

would include a capital improvements program by the City of Hemet indicating the location and timetable for the extension of City services, and a drainage plan for Salt Creek. Prior to development, the area should be annexed to the City of Hemet.

- The Domenigoni Hills are indicated as an open space preserve. This area could support agricultural uses or low density development with 2 to 10 acre minimum lot sizes, according to slope. Prior to development, the City of Hemet should annex the area and prepare a development plan. The City should handle the Santa Rosa Hills and the hills bordering the San Jacinto Valley on the west in the same manner.

- In the central business district, substantial land is proposed for office uses on the land use map. Such uses would enhance the regional market advantage of Hemet by creating a central business and administrative district. These office uses are seen as region-serving as well as community-serving, and would in particular benefit the economy of the central business district, which is lacking in commercial investment.

- Bordering the central business district on the proposed land use map is a concentration of medium-density residential uses, resulting from the proposed densification of inner city land.

Proposed land use policies

The land use map sets forth certain proposed land use policies regarding density and types of land uses. Below is a summary of these land use policies, as proposed by this general plan.

City-wide policies

- Existing low-medium density residential development has been connected together by filling in undeveloped intervening spaces. The larger areas indicated for residential development should allow substantial development flexibility under the PCD ordinance.

- Most existing single family detached housing is situated in the older districts of the city, and this plan suggests substantial development areas for such housing in other areas as well. Low density residential is suggested

in outlying areas because it will generate less traffic per unit of square area than will higher density development. The two principal single family residential areas in Hemet proposed for future development are in the northwest sector, bounded by Sanderson, Palm, Esplanade and Menlo, for the first case. Second is the southwest sector, where approximately 12,000 people now live in an unincorporated area, primarily in single family homes.

- The city is currently lacking land designated for residential uses at a density of 3-7 units per acre. The proposed land use map has made a particular attempt to provide for this density. It should be noted that this category does not imply a blanket coverage of 6,000 square foot lots, but rather a variety of densities within the stated range.

- In development proposals requesting a number of units per net acre that lies between two density categories--as would a density of 7.3 units per acre, for example, it is the intent of the proposed land use map that the residential land use categories be interpolated: "Low density, single family" would extend to a maximum of 7.499 units per net acre, and "Low-medium density" would begin at 7.500 units per acre.

- Highway-related commercial uses have been eliminated as a land use category. The automobile is now an integral part of nearly every resident's daily life, and most commercial land is today automobile-related in some way, either regarding parking, firm-client interface (as drive-in facilities), or merchandise sold.

Central business district policies

- Proposed uses include professional offices (see above), general commercial, public facilities, and medium density residential.

- Much needed improvement to the central business district falls under the purview of a community design plan rather than a land use plan. Such a plan is proposed for this area.

Northwest sector policies

- Where livestock or dairy activity abut residential uses, certain setbacks should be maintained to separate the animals from adjoining residences. Setbacks should be articulated in new zoning districts as are outlined below.

Southwest sector policies

- Industrial land uses are given substantial area around the Hemet-Ryan Airport.

- Development standards for this sector should be set through the PCD zone criteria, since large tracts are the usual configuration.

- It is recommended that the urban portions of the Salt Creek flood control channel can be developed as joint-use areas, allowing in particular for park and recreation uses.

Urban reserve policies

- Because large tracts of land in this area are under single ownership, much of this area can be master planned. Planning for these areas should await such an opportunity, probably in conjunction with a specific development proposal.

Land use implementation of policies from other general plan elements

Several policies and proposals of the other eight elements of this general plan contain provisions that can be implemented through land use planning. These implementation proposals incorporated in the land use map are described here. Numbers in parentheses refer to the original policy statement in the respective element document.

Housing element.

- The existing pattern of development shows employment and shopping uses along Florida Avenue, Stetson Avenue, and San Jacinto Street. Specifically, there are:

- Four shopping centers in West Florida, west of Lyon.
- Three shopping centers on East Florida, east of San Jacinto.
- Two shopping centers on San Jacinto, north of Oakland.
- Two shopping centers on Stetson.

The link between these centers is the central business district. Residential areas have been planned in conjunction with these shopping districts. In the southwest are several large-scale planned community developments that can have a mix of housing types with employment opportunities and retail and service uses, especially the Lewis Homes and Page Ranch areas. (Page 7, bottom, a).

- The proposed land use map provides for a range of housing types reflecting differing family structures and income levels. The plan proposes densities to accommodate medium density housing. The plan includes:

- Two new office centers exclusively for professional offices: east of city hall along Latham and Devonshire, the site of the old junior high school; and on the west side of State, south of Devonshire.
- Industrial districts may have substantial office uses. (Page 8, top, b)

- In ownerships greater than 100 acres, the planned community development district should be applied as the governing influence in land use planning. (Page 14, no. 15)

- Flood and drainage policies regarding land use will be developed as part of the flood and drainage element now under preparation. (Page 14, no. 16).

Open Space and Conservation element

- Proposals for open space preserves, discussed on page 16 of the Open Space element, and on page 86 of this element, above. (Page 20, bottom, a)

- Flood control planning will be undertaken upon adoption of the flood and drainage element, now under preparation. (Page 20, bottom, b).

- Water recharge areas correspond to proposed agricultural districts. See map, page 59, Open Space element. (page 21, 1a).

- Sanderson is the dividing line between agricultural and urban uses, with agriculture to the west. Park Hill is also indicated for agricultural uses. All lands currently covered by agricultural preserves are retained in the proposed land use map, except Esperanza Ranch at the southwest corner of Sanderson and Acacia.

Remaining agricultural lands include the farmlands west of Sanderson. North of Devonshire is being planned for agricultural uses, except for approximately sixty acres of low density rural estate lands. The southwest area currently being farmed has already been master planned as PCD for urban uses. Agricultural lands in Diamond Valley are also proposed to remain agricultural in conjunction with an urban preserve (see Open Space element, page 15). (Page 19, no. 1)

- Major streets serve as boundaries between agricultural and urban uses where possible, in order to retain maximum space between the two use categories. In the south, there is a gradation to very low density residential along the borders with agricultural uses. (Page 21, center, 1c).

- The general location for city parks is established in accordance with the Open Space and Conservation element. The City of Hemet should undertake a specific Parks and Recreation element, so that it may apply the Quimby Act. (Page 21, 1a, bottom).

- The seismic fault zones are shown on the land use planning map. Restrictions and requirements for ascertaining that only acceptable development will occur in hazard areas can be accomplished through existing ordinances. (page 22, 1a).

- Most industrial area indicated on the proposed land use map is already zoned for such uses. New areas are in proximity to the airport and railroad. Areas adjacent to the railroad are generally existing marginal industrial areas. The Hemet Redevelopment Agency should apply its planning efforts to these areas. (Page 22, 2b).

- The runoff problem of rock yards can be partially dealt with through a Community Design element, which the consultants proposed be undertaken by the City of Hemet, as discussed below. (Page 23,d)

- The proposed land use map for Hemet was designed to incorporate substantial new development in a relatively compact and contiguous area. However, this plan does not

propose a timetable for such development, nor a guideline as to the order in which planned areas should be infilled, since this is not construed as a growth management plan. (Page 23, 5).

- Regional through streets being planned for Hemet are limited to Sanderson, Simpson and Harrison. These are being master planned as part of planned community developments. (Page 26, bottom, 1).

- Areas in the southwest sector with slopes over 25 percent are generally restricted to passive recreational uses on the proposed land use map, particularly as open space preserves. (Page 27, 2).

- Bautista Canyon should be retained as an urban preserve. Portions of it should also be included in a Valle Vista community plan. (Page 27, 1a).

- The Highway 74 Scenic Gateway Overlook is a project the City of Hemet should request the California Department of Transportation to undertake. (Page 28, d).

- A minimum of four acres of property for each 1,000 persons is provided in the southwest area for city parks. (Page 30, 1).

- Hemet zoning standards require that fifty percent of the amount of land designated for parks, up to three acres per 1,000 population, be designated for neighborhood park uses. (Page 30, 3).

- Large-lot zoning is recommended in the zoning standards described below, to help preserve visual open space in agricultural uses. (Page 39, 10).

- In lands designated as open space preserves, residential lots should have a 1-5 acre minimum, depending on slope, soils and other requirements established by policy and ordinance.

Seismic and Public Safety element

The land use regulations necessary to implement the policy recommendations of this element can be taken care of primarily through building code provisions. In general, use of land does not predetermine safety. Safety is established more by structural measures. Emergency and critical facilities, however, have been located at some distance from fault zones on the proposed land use map. (Page 15)

Noise element

- The airport influence area defined by the 55 and 60 decibel contours has been indicated on the proposed land use map, and appropriate land uses have been designated in these areas, according to the requirements of the noise element. (Page 18, 2).

Scenic highway element

The provisions of this element can best be met through a Community Design element, proposed below.

Circulation element

- Major highways are generally spaced one mile apart. Collector and local streets are not indicated on the proposed land use map, but are to be provided according to detailed design proposals. (Page 12, 8).

- Planned major streets intersect at 90°, where possible. (Page 14, no. 18).

- The Santa Fe Railroad right of way is indicated on the proposed land use map as a linear park, in accordance with Circulation element policy Page 15, no. 8. This use assumes the eventual abandonment of the right of way by the railroad, and does not indicate that such abandonment is proposed in this plan.

Additional land use policy recommendations

Community Design element. The consultants recommend that the City of Hemet undertake a Community Design element, as an optional general plan element. This addition to the general plan could contribute a number of planning advantages to the city:

- Potential land use incompatibilities stemming from odors, dust, noise, and land use conflicts can be handled from a design standpoint, whereas the land use element is limited to addressing these matters from a standpoint of spatial distribution.

- The quality of life in Hemet can be enhanced through enhancing visual amenities. In this way the older central business district could be assisted with design standards to capitalize on its qualities of the American main street, as distinct from the design qualities of the remainder of the city.

- The Community Design Element could provide for the preservation of several structures in Hemet that have regional historical significance: the Ramona Bowl, the Santa Fe railroad station, and others.

- The older neighborhoods of Hemet are excellent examples of early 20th-century Southern California architecture and urban design. The amenities of these neighborhoods can be enhanced through design planning.

- Design standards for signage can be included.

- Design criteria can assist in development on steep slopes, as in the southern portions of the planning area.

- Privacy of residential areas can be enhanced.

The old central district of Hemet could benefit substantially from such a design element. The identity of Hemet as a community could be enhanced by setting out the city center as a special design district, with zoning and urban design guidelines sensitive to its unique character. Many other communities in Southern California have capitalized on older downtown cores through such tools as historic district designation or the restoration and adaptive reuse of vintage commercial and residential structures.

Parks and Recreation element. The City of Hemet should undertake a Parks and Recreation element to increase recreational amenities for its residents.

- A system of downtown mini-parks and plazas is encouraged as warranted by intensification and expansion of the downtown commercial core. ((Open Space and Conservation element, p. 35, no. 3).

- A community park larger than Weston Park would relieve Weston Park and provide more diverse recreational facilities. (Open Space and Conservation element, page 36, no. 1, top).

- A Parks and Recreation Element could specify locations, sizes, and facilities necessary for the entire Hemet park system, including neighborhood parks in proposed development areas that are not included on the land use map. (Open Space and Conservation element, page 37).

Industrial Park Ordinance. This ordinance can provide in more detail for the proposed industrial development of Hemet's industrial areas. This ordinance can provide for flexibility in minimum lot size, and can include certain performance standards. It would be especially appropriate for the large acreages in the southwest sector of the planning area.

Zoning district classifications. Several new zoning districts would provide greater flexibility and higher amenity levels for the city. In particular, the consultants recommend the following classifications:

<u>Classification</u>	<u>Land use</u>
R-1	Residential single family, 10,000 sq. ft. minimum lot size.
R-1	Residential single family, 15,000 sq. ft. minimum lot size.
AG-1	Agricultural zone with one acre minimum lot size.
AG-5	Agricultural zone with five acre minimum lot size.
CC	Civic Center district to establish land uses compatible with the Hemet civic center.

Each of these classifications should be provided with design and use standards. Today the largest lot size minimums in the city are 6,000 and 8,000 square feet. The AG zones are intended to provide for the quasi-ranch lifestyle sought by some homeowners, and which exists today in the northwest sector.

PCD zone implementation. The planned community development zone should stress the provision of open space, since such space in Hemet is limited at present. Open space requirements should be increased, the extent to be determined through a Park and Recreation element.

Spheres of influence. These areas surrounding the city limits are under Riverside County jurisdiction, but they are most important to the City of Hemet. Development outside the city limits that is more intense than rural estate should be avoided unless such land can be annexed to the city, since large scale development will place increased demands on city services, whether or not the area is inside city limits.

Zoning consistency. California state legislation now requires that the provisions of a city's zoning ordinance be compatible with the objectives, policies and programs of that city's general plan. Specifically, State law requires that there be "consistency" between the zoning ordinance and general plan, as follows:

1. County or city ordinances shall be consistent with the general plan of the county or city by January 1, 1974. A zoning ordinance shall be consistent with a city or county general plan only if:
 - a. The city or county has officially adopted such a plan; and
 - b. The various land uses authorized by the ordinance are compatible with the objectives, policies, general land uses and programs specified in such a plan.
2. Any resident or property owner within a city or a county, as the case may be, may bring an action in the Superior Court to enforce compliance with the provisions of subdivision (a). Any such action or proceedings shall be governed Chapter 2 (commencing with Section 1084) of Title I or Part 3 of the Code of Civil Procedure. Any action or proceedings taken pursuant to the provisions of this subsection must be taken within six months of January 1, 1974, or within 90 days of the enactment of any new zoning ordinance as to said amendments.

This land use plan has attempted to bring Hemet's zoning district into compliance with the general plan. Continued monitoring of zoning-general plan consistency is advised of the Hemet City Council.

Should further recommendations be forthcoming from the review and adoption process for this land use plan update, they will be included in the final draft of this document.

OPEN SPACE AND CONSERVATION ELEMENT
CITY OF HEMET

ADOPTED - June 22, 1982

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INTRODUCTION

This Element of the City of Hemet General Plan is essentially an update of the originally adopted Open Space and Conservation Elements prepared by Owen Menard and Associates. The City Council adopted that Element in December, 1973. This version has deleted many goals and other measures that are no longer applicable to the City of Hemet - either because they have been fulfilled, are not feasible for various reasons, or are no longer important. On the other hand, additional analysis, discussion, and goals have been added that were not considered in the 1973 version.

Intent and Purpose

This Element combines two general plan elements that are required by the California Government Code: the Conservation Element and the Open Space Element. The combining of general plan elements is permitted by the Office of Planning and Research through their General Plan Guidelines, published September 10, 1980. In concept, the integration and synthesis of the two elements, as presented here, is intended to not only fulfill the legislative mandate, but also offer an element that interrelates the different substantive aspects of each into a singular format. This approach not only recognizes the potential similarities of issues and phenomena of each but also attempts to present a context that emerges from an integrated analysis.

The purposes of the Conservation Element, according to Govt. Code Seciton 65302(d), state:

A conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers, and other waters, harbors, fisheries, wildlife, minerals, and other natural resources.

The conservation element should, according to the guidelines,

Promote the protection, maintenance, and use of the state's natural resources, with special emphasis on scarce resources and those that require special control and management;

Prevent the wasteful exploitation, destruction, and neglect of the state's natural resources; and,

Recognize that natural resources must be maintained for their ecological value as well as for their direct benefits to people.

According to Government Code Section 65563, every City and County shall adopt:

. . . a local open-space plan for the comprehensive and long-range preservation and conservation of open-space land within its jurisdiction.

The statute requires that the element address: 1) open space for the preservation of natural resources, 2) open space used for the managed production of resources, 3) open space for outdoor recreation, and 4) open space for public health and safety.

Furthermore, the intent of the law, according to Section 65562 states:

(a) to assure that cities and counties recognize that open-space land is a limited and valuable resource which must be conserved wherever possible, and

(b) to assure that every city and county will prepare and carry out open-space plans which, along with state and regional open-space plans, will accomplish the objectives of a comprehensive open-space program.

Generally, the Open Space and Conservation Element is a major tool for guarding Hemet's natural environment and managing local and regional natural resources for meeting public needs.

Organization

The organization of this element consists of a discussion of issues, opportunities and constraints (Part II). This is followed by Part III - Goals and Policies. This section also includes action programs as required by the General Plan Guidelines. Part IV consists of an analysis of the Natural Environment as it relates to open space and conservation. Emphasis is placed on the relationship between different features of the natural environment and land use. Part V is a similar analysis of the cultural environment. Here, archaeology, historic resources, and the like are studied for their significance in terms of open space and conservation. Finally, Part VI concerns the analysis of park needs as based on a neighborhood (planning area) analysis.

Parts II and III are based on the subsequent analyses contained in the last three sections. The reversed order, here, is intended to allow for the ease by which policies can be extracted from the text. Conclusions from the analyses are spread throughout, however. Certain research and concepts are presented first hand, none-the-less in parts II and III.

Relationships to Other General Plan Elements

This discussion is intended to provide the reader, policy maker, and technician with a clear cross-reference between this element and other General Plan elements. In doing this, the essential areas of relationship are mentioned. In all, this document is linked with the Land Use and Circulation Element, Seismic and Public Safety Element, Noise Element, Scenic Highway Element, and the Housing Element. Only the most important elements will be presented here, however. They include the Land Use and Circulation Element, the Scenic Highway Element, and the Seismic and Public Safety Element.

Land Use and Circulation Element. The relationship between open space/conservation and land use is mainly based on the coordination between plans, policies, and standards for land use that are reflected in both elements. It is important that the land use provisions of the Land Use and Circulation Element are consistent and, overall, supportive toward the fulfillment of open space and conservation goals and policies. Such provisions establish the location, type, intensity, and distribution of land uses throughout the City. Open space, agriculture, and parks are types of land uses. Their planning must fit within the overall land use scheme presented in this element. In addition, needs based on the land use plan must be clearly stated in the Open Space and Conservation Element. The circulation portion of this element provides the means by which accessibility can be met to important outdoor recreation, scenic, and other resource-type areas presented here.

Seismic and Public Safety Element. This element points out various areas and features that must be safe-guarded against. The Open Space and Conservation Element provides a vehicle for integrating this public need with other related conservation measures. In particular, public health and safety concerns presented in the Seismic and Public Safety Element are integrated with open space and conservation policy.

Scenic Highways Element. This element provides for the development of scenic highway corridors and provisions for maintaining such corridors. Where there is a definite tie with open space and conservation, scenic highway element provisions are valued here as resource provisions.

I I

I S S U E S

O P P O R T U N I T I E S

A N D C O N S T R A I N T S

ISSUES, OPPORTUNITIES AND CONSTRAINTS

Development Trends

Regional open space and conservation areas together form the context within which urbanizing development occurs. Through planning, valuable open areas may remain unurbanized for use and enjoyment by future generations, while at the same time forming boundaries within which urban development is permitted. Thus, as a beginning to creating an overall understanding of what has been happening in the Valley, development trends were looked at. Where has development taken place and what are the implications of existing policies and plans that will shape or encourage the development trends of the future?

The City of Hemet is a community that has, in a matter of about fifteen years, been transformed from a small commercial center serving the needs of an agricultural region to a rapidly growing retirement community, as well as a market center. This transformation has caused great changes in Hemet's urban form. The once small, compact residential town with its central commercial core is now taking on a different image. Essentially, it is a change of scale with a more diversified economy and adding a service sector to the many productions associated with agriculture.

In recent years mobile home developments oriented for retired people have formed a development trend in the western part of Hemet and in adjacent county fringe areas to the west and north. Commercial development has spread from the original central downtown area into the midst of growing residential development. Recent years have seen much infilling of vacant areas in the eastern part of Hemet with new residential development. This development has spread into the county lands east and north of Hemet where many small and scattered subdivisions have been created. While much of the new growth has been the infilling of vacant areas within Hemet, a great deal of the recent development has formed a scattered pattern of development extending from Hemet into unincorporated areas to the west, north and east.

Urban Form and Open Space

Regional open spaces are essentially unurbanized or undeveloped areas. Generally, with the exception of such urban open space uses as neighborhood parks and playgrounds, urban

areas and open space areas are mutually exclusive--an area is either one or the other. Further, in many instances urban uses and open space uses in close proximity to each other are found to be incompatible. This is also true for important natural resources. Some of the principal reasons for this phenomenon are:

- 1) New urbanization brings higher land values and thus higher taxes to nearby open space areas which may then become uneconomical to support agricultural uses.
- 2) Many agricultural uses will be pressured out of an area by new urban neighbors and the often inherent incompatibility with such associations.
- 3) Ecological preserve areas and similar natural resource areas often cannot withstand the increased usage that comes from having urban uses nearby.

Thus, urbanization affects open spaces and natural resources by, one, taking over these land areas directly, and two, by extending urbanizing influences over neighboring undeveloped open spaces and natural resources. This is the reason for the concern with urban form in an open space and conservation planning effort. A scattered pattern of development is not only poor planning in terms of the economics of servicing an area, but it is also poor planning in that a scattered growth pattern causes and encourages the premature abandonment of open space and natural resource area uses. Typically, agricultural uses are forced out by the reasons explained above and agriculturists sell to speculators or become speculators themselves. The speculator will often let the land lie fallow and in general not be there to take care of it, causing a loss of agricultural production. The land is then urbanized when and if the market permits such development. This relates directly to the preservation of prime agricultural lands. Once allowed to lie fallow for several years, their agricultural value is often forgotten by the community, opening the doors to planning decisions which permit their development.

Regional Open Space Plans

The County Open Space and Conservation Elements were adopted by the County in June, 1973. Presented as one plan document, the plan sets forth the following broad County policies:

- 1) Future urban development in the County should be primarily located within areas where public facilities and services can be provided efficiently and economically. Care should be taken to provide

sufficient public and private open space within the urban areas.

- 2) Areas nearest the urban areas should be utilized for such uses as low density development, light agriculture, recreation and other compatible uses which do not require public services to the extent required for the urban areas.
- 3) The lands outside of the low density development areas should be utilized for very low density residential and for such other uses as agriculture, recreation and mineral resources.

The existing County open space element and land use element are not consistent insofar as areas designated for urban development. In general, the land use plan (1968 Hemet-San Jacinto General Plan) indicates a larger urban area. The open space plan, however, indicates low density residential in the "rural areas". The zoning districts considered compatible with open space uses allow for urban densities.

Concerning the inconsistencies between the two plans, the Open Space-Conservation Plan states: "Where the map showing the Land Use Element of the Riverside County General Plan, as amended, conflicts with the map of the Open Space Element of the Riverside County General Plan, the map of the Land Use Element of the General Plan shall govern."

The County Open Space and Conservation Elements detail far-reaching policies with regards to protecting open spaces. According to an analysis of these plans, however, they designate an inordinate amount of land for urban uses. Such designations are at the expense of open space designations. Suffice it to say that existing County plans encourage a pattern of scattered growth and this will occur primarily at the expense of agricultural areas as it has in the past. The Hemet area's planning needs are critical for the losses in open space, natural resources, and livability.

The County is now in the process of reviewing a new General Plan with hearings for its adoption scheduled for early 1982. Under Chapter V, Countywide Policies and Development Standards, the following are listed with regards to open space and conservation:

- 1) The open space characteristics of the County, including the rivers, the mountains, the deserts, and the productive agricultural lands shall be protected.
- 2) Whenever possible, the natural terrain of the County shall be used to separate and define the urban communities of the County.

- 3) The premature extension of public services, facilities, utilities and other capital improvements, for urban uses, into open space shall be discouraged, in order to promote the development of contiguous urban communities.
- 4) Open space areas of unique, representative or fragile ecologies needed for education or scientific research shall be conserved.
- 5) Natural floodways, drainage channels, seismic fault zones, and slopes in excess of 25 % should be retained as open space.
- 6) Urban development adjacent to publicly owned open space lands shall be developed in a manner which is harmonious with the character of the area and will not conflict with public open space uses.
- 7) The management principle of multiple use and sustained yield in the development and use of natural resources shall be promoted and encouraged.
- 8) Natural features such as hillsides, rock outcroppings, major stands of trees, unique scenic features and other characteristics which contribute to the natural beauty of an area shall be preserved and incorporated into the design of any development occurring in these areas.

The new General Plan is conceived to be a "development criteria" policy plan where emphasis is on the review of projects and assessing their potential for being serviced with infrastructure. Since the plan does not reference the distributional aspects of various phenomena or resources it may not affect the scattered pattern of development now occurring in unincorporated areas of the Valley.

In another regional plan for open space and conservation (Conservation and Open Space Plan) adopted April 7, 1977, by the Southern California Association of Governments, only two features were mentioned that are located in the Valley. These are 1) Bautista Creek and 2) the San Jacinto River and Flood Plain. The responsibility for their management is listed as Riverside County together with the Department of Conservation (State).

Policies Governing the Extension of Services

Policies governing where, when, and under what conditions necessary urban-related public services will be extended to proposed or newly developing urban areas greatly affect

urban form. Necessary services, such as sewer and water, can be the critical factor in determining whether a development is to be feasible. Furthermore, a decision to extend such services to a new development greatly increases the feasibility for providing that service to other properties along the new service line or service corridor. In general, necessary public services are provided to newly developing areas of the Hemet Valley on a demand basis. There is little or no consideration of the role the extension of these services could or should play in implementing a planning urban growth policy that will provide for adequate urban developable land, as well as protect open space and conservation resources.

Flood Control Works. The Riverside County Flood Control and Water Conservation District has prepared plans for flood control works along Salt Creek in the Hemet planning area. The project, which would consist basically of a broad, grass-lined shallow swale, would not only protect the developments which were allowed within the flood plain of the one hundred year flood, but would also open many square miles of land for urban development which are now withheld because of the drainage problem. Hemet is currently studying the problem as well.

Water. It is possible, through controlling the extension of water service, to control the extension of urban development. A spokesman for the Eastern Municipal Water District, which serves most of the Hemet area, has indicated that it is the District's policy to extend water service to anyone who wants it and can afford it. Other ways in which water will affect development are discussed in the section on The Role of Water in the Future.

Sewerage. The Eastern Municipal Water District has a sewer treatment facility with a five-million gallon capacity. Although the State Water Quality Control Board's policy on expansion of sewer facilities usually requires expansion of existing facilities, the District is considering the construction of a new plant in Winchester to serve the southwestern portion of the Valley.

The Hemet-San Jacinto Sewerage Treatment Plant is located outside of the Hemet planning area to the west of San Jacinto. Effluent is pumped from the plant a distance of four miles to percolation grounds near the San Jacinto River. There it is percolated to the groundwater table, a process which is frowned upon by some hydrologists and water quality engineers because of the high mineral content of the effluent.

Sanitary sewers are now available in all of the urbanized portion of the Hemet planning area. Some mobile home parks, however, are served by septic tanks. In the future, urban

development will probably be required to have sewer connections. A proposal by the Water Quality Control Board would require that all developments with densities of two or more units per acre have to be served by sanitary sewers.

Fire Protection. Fire protection in unincorporated areas of Riverside County is provided by the County Fire Department and the State Division of Forestry. The State Division of Forestry is responsible for fire protection in hilly areas outside of cities. The County is responsible for unincorporated flat areas. The same person dispatches units for either case.

All fire fighting in unincorporated areas is financed by either the County or the State. There are no special fees charged for developments in isolated fire-hazard areas, although there are requirements regarding the provision of adequate roads for ingress and egress and for fire fighting equipment. Fire insurance rates in isolated areas are also higher.

Solid Waste Disposal. Refuse disposal is a problem which literally increases in proportion to the increase in population. At present there are two sanitary landfill sites in the Hemet planning area. The disposal site located west of Winchester is a 300-acre site that has a life expectancy beyond the year 2000. The termination date of this site is dependent on the length of concurrent use as a County Regional Park. A portion of the site is already in use for recreational facilities. The other landfill site which is used less frequently by the City of Hemet is in Lambs Canyon, 12 miles northwest of the City on Highway 79. The life expectancy of this site is also beyond the year 2000.

Resource Conservation

Air Quality. Air quality is a factor that once equalled climate in its importance as an impetus to growth in the Hemet area. Many of the retired persons who have moved to the area had lived or had planned to live in the more urban areas of Southern California, but they settled in Hemet because of the clear, smog-free air. This situation appears to have changed.

According to the Riverside County Air Pollution Control District, the position of Hemet is such that it accrues the contaminate generated further west. It also generates some of its own pollution, but this alone would not be very serious. Approximately ninety percent of the pollution generated in the Hemet area is from motor vehicles; the other ten percent is generated by varied activities such as agricultural

operations (orchard heaters), roofing kettles, sand blasting, air traffic at Ryan Field, the one-train-a-day on the railroad, and charbroilers.

Because Hemet is close to the mountains, there is a strong ventilation factor and better air circulation than in most of western Riverside County. This does not change the fact, however, that the State Air Quality Control Board considers the Valley to be part of the "critical air area" that covers most of the urbanized area in Southern California.

As mentioned earlier, the clear and smog-free air in the San Jacinto Valley has played a similar role to the climate in attracting the elderly population. Unfortunately the quality of the air has been decreasing, mainly as a result of population and industrial growth in the urban areas to the west. Should the quality of the air continue to deteriorate, it is possible that Hemet will lose its attractiveness as a place to retire. Furthermore, studies have shown that poor air quality can also be detrimental to farming.

Although it is doubtful that Hemet would allow a smoke-spewing industrial plant to locate there, the combined effects of additional automobiles, trucks to carry goods for new residents, and airplanes at the airport will undoubtedly have some detrimental effect upon the air quality. The major impact upon air quality, however, will come from the Los Angeles and Riverside areas.

A positive effect which land use can have on air quality is that produced by trees and greenery. Experience has shown that vegetation cleanses the air of impurities and that large plants, such as trees, are most effective.

An additional and rather involved effect of air quality upon land use could come about as a result of the policy of the State Water Quality Control Board. This policy states that, within the "critical air area", the State and Federal governments will make loans or grants for sewage facilities to serve only a ten-year projected natural population increase. If this policy is followed rigidly, all improvements in the sewage system will have to be financed locally.

Soil Conditions. As shown in the previous Regional report, practically the entire City is situated on an almost level plain of deep alluvial soils in the prime agricultural classification. There is a small portion of hillside within the southern limits of the City near the end of State Street. A large area in the southwest corner of the City is in the Salt Creek Flood Plain.

Soil conditions throughout the City are such that the condi-

tions of collapsing described earlier should be considered prior to development, particularly for larger structures and particularly in the central, older area of the City. Several major buildings in the City have experienced significant degrees of sinkage, including the Hemet Savings and Loan Building, the Nevins Building, the Library, and the Hemet Elementary School. The central part of Hemet is more prone to this problem than other areas due to prior construction without compaction. Recognizing its special soil problems, the City requires soil tests for all commercial buildings. Local area soils have been drained of much of their water content and the introduction of heavy irrigation has caused compaction to occur after construction. Lawns introduce a form of heavy irrigation.

Street Trees. Hemet has many fine old trees lining its streets. The trees are clearly an important natural resource, providing avian habitats, helping to cool the hot summer days, and are beautiful to look at. The City has been improving its major thoroughfares and in some cases has found major trees in the path of the new roadway. The City has had the wisdom to replant nearly all of these in the adjacent narrowed parkway area, where possible, or in other places such as Simpson Park where this is not possible.

Development Codes

The City of Hemet's zoning and subdivision regulations have several requirements related to open space and conservation. There are requirements for the provision of private recreational facilities in mobile home and park subdivision developments. This includes the TR-20 zone and mobile home parks. The City's PCD (planned community development) zone has a requirement for ten percent of a development be set aside for common open space. Park areas and recreation facilities are also a part of the requirements.

The Hemet Public Works Department presently collects development fees for open space from the developers of all subdivisions (where land is not dedicated for public open space use). The fee is \$300 per acre or \$50 per lot depending on the zone.

To acquire a neighborhood park of a minimum size of five acres in the Southeast Area of the City today, it would cost the City \$125,000 assuming approximately \$25,000 per acre. With "in lieu fees" of \$300 per acre for open space, the City would need approximately 420 acres of proposed development to collect the necessary funds to acquire the necessary five acres. However, 420 acres of residential development

at an average density of ten people per acre produces a demand for ten acres of open space. This assumes that the private sector requirement is reduced to 2.5 acres per 1,000 people. To equalize the provision of open space and open space demand, assuming the open space per population ratio is desirable, greater development fees, development incentives, exactions, or funds from County, State, and federal sources are necessary.

Another development regulation relevant to this plan is the section of the City Zoning Ordinance entitled, "Park Subdivisions". It states:

The purpose of creating the classification of Park Subdivision in the City of Hemet is to provide for subdivisions of not less than ten (10) acres of land, which subdivisions provide a recreational area owned in common by the owners of the individual lots, and to allow the sale of individual lots to private individuals in strict conformance with the terms and conditions under which subdivisions are approved by the Hemet Planning Commission and the Hemet City Council.

The regulations then go on to state the following requirements for recreation areas:

Community recreation and service areas containing clubhouse, recreational area for outdoor games and activities such as shuffleboard, horseshoes, putting greens and swimming pool, shall be shown on the plans and specifications. Location and size of all facilities indicated in this paragraph must be approved by the Hemet Planning Commission and the Hemet City Building Department. There shall be a minimum of 270 square feet per lot of recreation area, exclusive of any lot, provided within the park subdivision. The clubhouse shall have a floor area of not less than twenty-five (25) square feet per residential lot, and shall include adequate kitchen, rest room and storage facilities therein.

The incentive to go the route of the park subdivision is that it permits a somewhat higher density than would normally be permitted.

The City has a special zone for mobile home subdivisions known as the TR-20 zone. Mobile home subdivisions are distinct from mobile home parks in that the former sell lots, whereas the parks rent spaces. The TR-20 zone requires a minimum of twenty acres for a tract and calls for the same basic community recreation facilities as the park zone, that is 270 square feet of recreation area and twenty-five

square feet of clubhouse floor area for each lot.

Mobile home parks must have a minimum of ten acres. According to the zoning regulations, they have the same basic requirements for private recreation areas as park subdivision and TR-20 zones described above. The City has three small mobile home parks that came in before the regulations that do not have private recreation facilities.

Looking at the general land use categories as portrayed in Hemet's zoning regulations, there are no real agricultural or "open space zones". The zone of least density is the residential-agriculture category which provides for a minimum lot area of 20,000 square feet. As explained in our previous analysis of County zoning, this density would not qualify it as a true open space zone. The R-A zone has been used for large undeveloped tracts near the City limits. If Hemet pursues plans to annex large areas of undeveloped agricultural land to the west, a true agricultural zone will probably be necessary as a holding zone to prevent premature development.

Hemet's Urbanizing Fringe

There is considerable urban development in the unincorporated areas around Hemet. This development is most concentrated in the immediate vicinity of Hemet and becomes more scattered further out. Development is spread throughout most of the buildable valley floor areas, occurring primarily along an east-west axis around Highway 74, and along State and San Jacinto Streets where they connect the City of Hemet to the City of San Jacinto to the north.

Much of this fringe area development is fairly recent, and more is either underway or likely to occur in the future. As explained, the urbanizing fringe areas are generally supplanting prime agricultural lands. These agricultural lands have traditionally been field crops and horse ranches to the west of Hemet and apricot and walnut groves to the east.

Because the urbanization of the fringe area has been in a scattered pattern of development, it is placing much more urban development in physical contact with agricultural and other regional open space uses than would occur were the new development to form contiguous growth patterns concentrated around the immediate vicinity of Hemet. As also explained, the nearby physical presence of urban development to agricultural open space makes it much more difficult to maintain that open space as an economic use. The presence of nearby urbanization causes higher land values for nearby agriculturists. Also urban development

is often incompatible with certain agricultural activities such as feed lots, smudge pots, etc. Furthermore, scenic and wildlife areas can be threatened due to the great increases in use brought about by having urban developments close by. Heavy people-use of such areas invariably frightens game away, causes litter and erosion, and increases fire hazards. Thus the present scattered pattern of development is causing a quicker loss of open space and conservation resources to urbanization than would occur if a contiguous development pattern were in progress.

Development trends in this urbanizing fringe area have basically followed the same pattern observed in the City of Hemet: retirement-oriented developments to the west and "family" type subdivision to the east. State Street, which runs north-south through the study area, approximates the transition point between the two types of development, both within the City and in the fringe areas.

The eastern fringe area still has many fruit trees, leftovers from the once expansive apricot and walnut groves. These are important natural resources which to a great extent could be preserved, if not for economic production, then at least in parks and private yards. There have been cases where residential developments have been integrated into a working fruit orchard where the fruit trees are cared for and harvested through an agreement between a Homeowners Association and an agriculturist. In these cases the houses are so sited as to make the necessary maintenance and harvesting of the trees feasible.

Constructing a Framework for Plan Preparation

A viable approach to planning for conservation, open space, and other public needs concerns, first of all, a process and organization. This involves both a means to relate different elements and plans together and a means to regulate and coordinate the timing of the plans. By partitioning various areas of the Valley and study area off into separate areal divisions, the framework for this analysis is provided. This perspective of planning is, essentially, a form of spatial analysis that also suggests a temporal structure to the task.

In its broadest sense, open space serves to delineate and delimit the shape of urban areas. Mountains, forests, water bodies, rivers, orchards, farms, fields, and parks all combine to establish the urban and regional morphology. We plan such areas, either by preserving them, reserving them, or developing them, in order to create a desired urban

form. In the case of this element, the planning of open space is inextricably bound to its function and to the land use and circulation elements. Functionally, open space may provide for various recreational and economic activities, along with leisure and aesthetic functions.

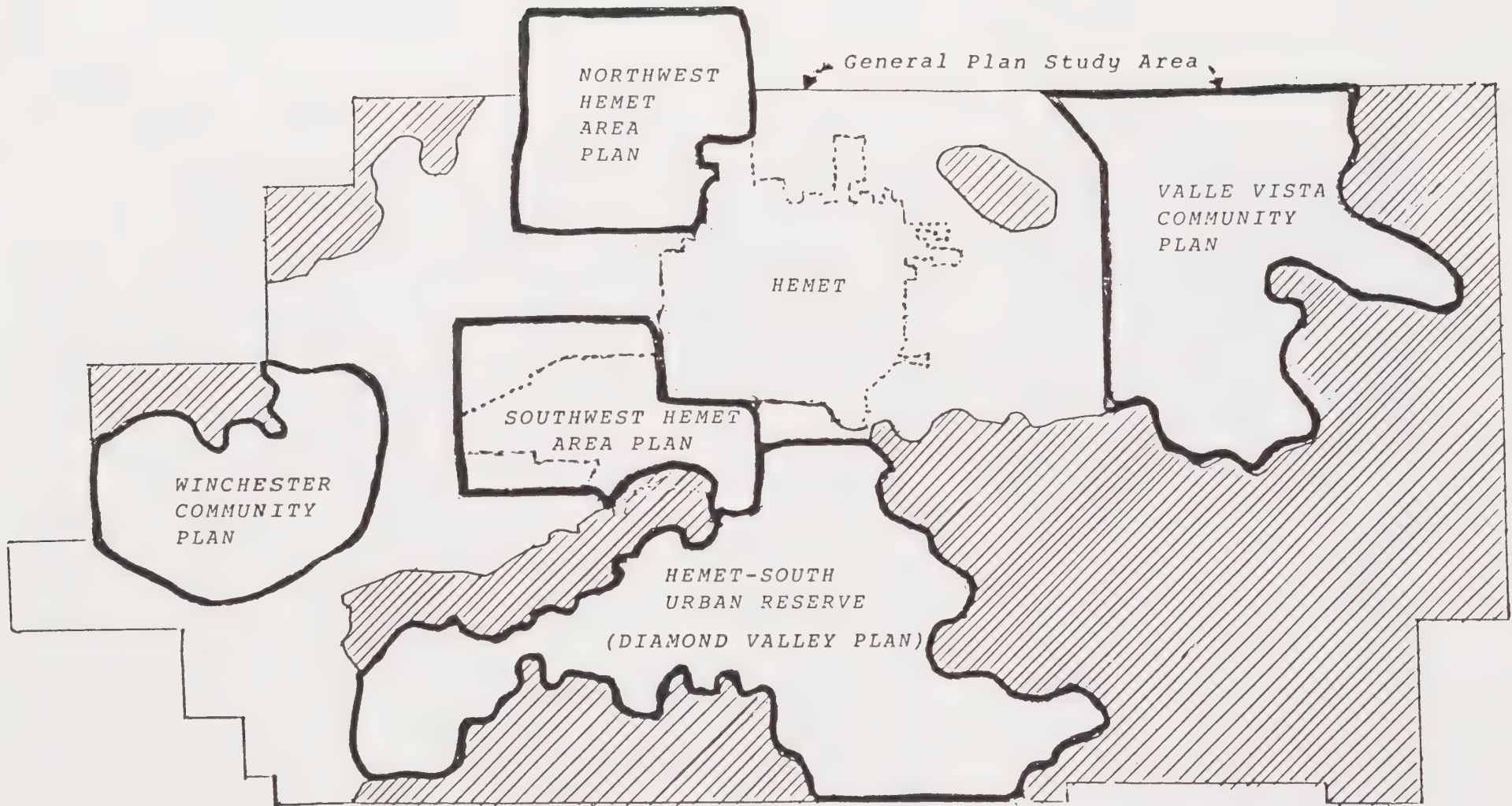
This General Plan utilizes the concepts of open space preserves and urban reserves. Each is dependent in application on the other. For instance, an open space preserve may have a life of ten years, after which it converts to urban development. In the meantime the preserve functioned as an urban reserve. It was an area preserved as open space until it converted to urban. This is the case of the urban reserve. Typically, however, open space preserves are held as open space indefinitely. Included in this definition is the agricultural preserves established under the Williamson Act.

Figure 1 illustrates the application of this framework. A description of the different areas comprising the plan including conditions of their implementation follows.

Hemet-South Urban Reserve. That area comprising Diamond Valley, that straddles both State Street and Newport Road, and is presently under cultivation for potatoes. Existing parcels range in size from one-half acre to 160 acres. Upon converting from the status of urban reserve to development, the area should be masterplanned jointly by the City and property owners. This would include a capital improvement plan and program by the City that would indicate how services could be extended. In addition, the area's flood control problems should be solved, particularly, with reference to Salt Creek. Prior to development the area would be annexed to Hemet with the "Diamond Valley Community Plan", alluded to above, providing the basis for land use designations, plans for servicing the area, and other related policies.

Domenigoni Hills Open Space Preserve. Mainly, that area comprising the Domenigoni Hills in the southwest portion of the Valley. This area could support agricultural uses, if feasible, and low density development with lot sizes ranging from two acre to ten acre minimums, depending on the percent slope. Prior to annexation and development of the hills, the City should consider preparing an area plan that details development standards and criteria. The same situation described above would fit the Santa Rosa Hills, the hilly area south of Diamond Valley, and the hills bordering the Valley on the west.

Other Area Plans. In addition to the above, Area Plans for the northwest and southwest areas of the Hemet area will be prepared as part of the Hemet General Plan. The communities of Winchester and Valle Vista also warrant

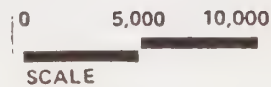


Open Space Preserves



Area Plans, Community Plans

Figure 1
SPATIAL FRAMEWORK
FOR PLAN PREPARATION



their own community plans. When prepared, these should be made integral with the Hemet General Plan.

I I I

G O A L S

A N D P O L I C I E S

GOALS AND POLICIES

Introduction

The following measures, upon adoption by the City of Hemet, constitute the City's official position with regards to conservation and open space matters. It also represents a commitment to action in cases requiring some concerted effort and the exercise of the City's constituted power. Since many of the goals and policies are already adopted by the City (December 6, 1973) their review and reconsideration leads to the revision and amendment of City policy.

The matrix analysis presented in Figure 2 provides a means to prioritize and order City goals and policies. As shown, the vertical axis represents a list of possible natural resources and areas with inherent limitations. These areas also include special kinds of features that reflect some legal or cultural limitation. The horizontal axis includes the broad categories of public need that can be met through the preservation or conservation of natural resources. Additionally, each of the four categories has a range concerning the relative level of applicability to the Open Space and Conservation Element. Conceptually, the more categories of need a particular resource relates to, together with a high rating of applicability, in fulfilling some public need, the higher the priority it deserves. A shortcoming exists, however, in this analysis, since it does not attempt to indicate a priority of types of needs (horizontal axis). This is a choice of the City Planning Commission and City Council. However, certain policy choice scenarios can be drawn from the matrix.

An initial look at the matrix presents the impression that agricultural lands, flood plains, earthquake fault zones, scenic areas, and outdoor recreation are resources that relate to the broadest spectrum of public need that the Open Space and Conservation Element is responsible to. However, the interpretation presented in the matrix is an individual view of the applicability of resources to needs. It is subject to a variety of tests of diverse opinions that the goal and policy formulation process produces. The following statement of goals is organized along the categories of need.

Open Space Preservation

1. Agriculture has been of great value to the community, both in terms of economic gains and as a means of preserving open space. Therefore, efforts should be concentrated upon retaining as much agricultural

OPEN SPACE AND CONSERVATION LEVEL OF NEED ANALYSIS

IMPORTANT AREAS AND NATURAL RESOURCES	OPEN SPACE PRESERV.			RESOURCE PRODUCTION			OUTDOOR RECREATION			HEALTH & SAFETY		
	Major	Minor	NA	Major	Minor	NA	Major	Minor	NA	Major	Minor	NA
Forest Lands		X			X		X				X	
Rangeland		X			X				X		X	
Farmlands	X			X					X		X	
Aquifers		X		X					X	X		
Rivers	X			X				X			X	
Streams	X				X			X			X	
Mineral Dep.		X			X				X			X
Parks	X				X		X				X	
Historic Places		X				X			X			X
Cultural Areas	X					X	X					X
Scenic Areas	X					X	X				X	
Utility Emts.		X				X		X				X
Scenic Hwy.		X				X		X				X
Trails		X				X	X				X	
Critical Slopes	X					X			X		X	
Fault Zones		X			X				X	X		
Unstable Soils		X		X					X	X		
Flood Plains	X			X			X			X		
Water Sheds		X		X					X		X	
Fire Haz. Areas		X			X				X	X		

Figure 2

land as possible.

- a. A special committee of the City of Hemet and the County of Riverside should be formed to critically analyze the economic feasibility of continued utilization of agricultural lands and to devise realistic recommendations thereon.
 - b. Where possible, the City shall support the application of the Williamson Act in establishing and maintaining agricultural preserves.
 - c. The City shall devise land regulation measures that are fitted to specific agricultural uses as they exist in the Valley. Provisions for health and safety will be used.
 - d. The Department of Agriculture (State of California) and the University of California at Riverside should be asked to investigate new crops which can be economically produced in the Hemet area.
2. Preserving open space is essential to the conservation of critical resources. Therefore, the City of Hemet shall encourage such preservation through its actions, decisions, commitments of funds, and the exercise of its police power.
- a. The City will initiate plans for the preservation of open space preserves in areas that consist of hills located in the peripheral portions of the planning area. Such plans will contain standards and criteria for resource conservation to include, but not limited to, slope areas, rock outcroppings, scenic resources, wildlife habitats, fire hazard management; and, development to include, but not limited to, road sitings, residential densities, other land uses, and the extension of utilities and public services.
 - b. The City will plan for flood control in a manner that encourages multiple use of flood channels. This includes the provision for open, green, natural-looking channels. Trails, recreation, and agricultural uses are encouraged in the channel rights-of-way.
 - c. The City and County should develop subdivision and development practices in the Hemet area that will foster open space and land conserva-

tion concepts, such as, clustering, zero lot lines, coverage incentives, and density transfers.

- d. Hillsides should be valued for their scenic value. The City's newly adopted Hillside Development Standards (9-28-82) should be carefully enforced.

Resource Production

1. The City is committed to the stewardship and management of the production of the Hemet area's natural resources. This includes agricultural production, water conservation, mineral extraction, and soil conservation.
 - a. The City will enact measures to protect areas required for recharge of ground water basins.
 - b. The City will enact specific zoning regulations for the extraction of geologic minerals and materials.
 - c. The City recognizes the importance of the viability of agricultural production to the economy of the Valley. Therefore, the City will enact ordinances and regulations that support the continued use of agricultural lands and protects against problems of incompatibility with urban uses.

Outdoor Recreation

1. The City shall plan and program for the development of parks and other areas conducive to outdoor recreation. Such plans and programs should be designed so as to be responsive to the needs of multiple publics and people of various age groups.
 - a. Park facilities should be located so as to be accessible to people who might want to use them.
 - b. Park sites and elementary school sites should be coordinated in order to maximize neighborhood open space and park facilities. This will provide for a more efficient joint utilization of public property.
 - c. The City should take all steps necessary to

implement the provisions of the Quimby Park Acquisition Act. In doing this, the City should encourage the County to take similar steps that would lead to the acquisition of land for park purposes in the unincorporated areas of the Valley. Priority, in both cases, should be given to neighborhood park land acquisition with the second priority given to park facility development.

- d. The City should adopt park dedication requirements for large scale developments. This measure should be reviewed in terms of whether certain projects will generate a private demand that can be handled privately by the development or a public demand that suggests the need for public facilities.

Public Health and Safety

1. The City will provide for the necessary measures that will protect the health and safety of the Valley from misuse or neglect of natural phenomena.
 - a. The City will establish restrictions and standards to prohibit or control development in hazard areas, such as, flood plains, earthquake fault zones, areas consisting of collapsing soils, areas of instable slopes, and areas subject to wildland fires.
 - b. The lowering of property assessed values should be encouraged on non-buildable property, such as, floodways and earthquake faults.
2. The City will provide for the necessary measures that will protect the health and safety of the Valley from the misuse of land and the harmful externalities that can be generated by different land uses.
 - a. The City should support and use the present measuring device for smog and should immediately notify health facilities, schools, and places where people congregate of dangerous smog levels.
 - b. Only clean industrial development which is compatible with existing environmental quality should be encouraged. Such development should be channeled into planned areas.
 - c. Current development policies which allow great

amounts of land to be impervious to water percolation should be examined in light of the serious flooding caused by this excessive runoff.

- d. Water resources are of such importance to the area that they must be safeguarded through the preservation and use of natural percolation areas and the discouragement of all uses which result in the discharge of poor quality effluent.

Policies and Standards

Intergovernmental Relations. For the County to undertake the type of planning indicated as needed in the Hemet area would require that the County establish an intimate and current knowledge of the area. Ongoing, comprehensive planning, coupled with intimate local area knowledge is necessary if the Valley is to avoid the sprawl development experienced in most of the Los Angeles area. The City is the only locally-based government in the study area with the capability to assume the necessary leadership to create a planned environment where present and future generations can live healthy lives in inspiring surroundings. A decision-making process rooted firmly in local knowledge, local concern and local leadership is necessary to ensure future planning decisions which will avoid urban sprawl. Policies are:

1. Hemet shall act as the catalyst for area-wide open space planning by assuming a leadership role in assessing open space, recreation, and conservation needs and encouraging the establishment of plans to address them.
2. The City shall establish a regular referral process with the County through which the City, by having intimate knowledge of the area, will be able to play a key role in guiding future land use decisions as well as County plans, policies, and zoning regulations.
3. The City should seek ways to influence the water district and flood control district to employ policies and decisions that provide services and facilities consistent with the City's policies on land use and phasing development.
4. Hemet should coordinate planning activities with the City of San Jacinto in furthering Valley-wide policies beneficial to all residents in the area.
5. Encourage development to occur adjacent to existing

urbanized areas in order to preserve large parcels for adjacent uses.

6. In large developing areas, encourage the preparation of master plans that include private and public open space networks to help meet the overall need for open space and recreational amenities.
7. New innovations in housing design and density transfers aimed at preservation of agricultural land and/or permanent open spaces are encouraged.

Environmental Review. This plan establishes the precept that open space and conservation resources in the Hemet area need to be respected and protected. With this foundation, Hemet can help guide decisions in its area by gathering, maintaining, and utilizing information about the surrounding environment. The environmental information presented in this plan is really a first step towards an organized environmental inventory of the Hemet area. Such an inventory will make full utilization of the Environmental Impact Report process. Proposed developments within the planning area should now be checked with this inventory. This would indicate likely areas of environmental concern. Further research would then be done in appropriate chapters of the plan. At this point there are several possibilities:

1. Existing environmental knowledge of the proposed development area is adequate enough to show that the proposed development will not cause any adverse environmental influences, and the project can be granted a "negative declaration", meaning no Environmental Impact Report (EIR) is needed.
2. Existing environmental knowledge of the proposed development area is adequate enough to show that the proposed development will cause irreparable harm to the environment, and the developer is shown this information and encouraged to either abandon or adequately modify and resubmit his proposal.
3. Existing environmental knowledge of the proposed development area is deficient in one or more areas. The developer is requested to prepare an EIR in which an especially careful investigation is required in those areas in which the environmental inventory is deficient. Relevant portions of the EIR are then added to the inventory for use in future projects. Meanwhile, the proposed development can either be accepted, rejected, or required to be modified in accordance with the environmental information.

The above review process would work either for projects within the City or for projects outside of the City within Hemet's planning area, with the City of Hemet acting as the County's advisor. In either case, Hemet would be maintaining and building a stock of knowledge about the area and applying the leadership necessary to insure sound environmental decisions. Policies are:

1. The City shall maintain a current environmental inventory of the Hemet area by which development proposals will be evaluated.
2. Hemet should undertake or, where appropriate, encourage County, regional, or state agencies to undertake additional environmental studies to supplement the environmental inventory and analysis of the plan in the near future. They shall include, but not be limited to, the following:
 - a. Archaeological Inventory. This would provide the most feasibly complete inventory of archaeological remains in the area, ranking them in priority categories in order to determine which areas should be preserved.
 - b. Collapsible Soils. A special investigation of this potential problem is warranted and should be carried on in conjunction with a similar investigation keyed to soil problems associated with larger structures within the City of Hemet, particularly in the central area of downtown.
 - c. Sensitivity of Hillsides to Development. Although there does not seem to be evidence of erosion, landslides, or other such problems that might impair or result from future hillside development, there has not been sufficient hillside development by which to evaluate this concern. Hillsides in semi-arid climates, such as Hemet's, typically exist in a precarious balance of soils, vegetation, and runoff. This balance is often upset by development. More information on the sensitivity of Hemet's hills to development is needed.
 - d. Future of Agriculture. Studies need to be undertaken to determine the economic viability of agriculture in the Hemet area and any new crops that might strengthen the position of agriculture, also, of ways in which modified County policies on agricultural preserves and State and County Assessor policies on taxation could help agriculture.

Runoff. Groudwater levels in the Hemet area are largely dependent upon precipitation and runoff from nearby hills for recharge. While groundwater quality and quantities in the area continue to decrease, flood control works and drainage facilities (seemingly necessitated by urbanization) carry local runoff out of the area. The hazards of runoff to property and lives increase as new construction covers open lands. To the fullest extent possible, runoff should be permitted to percolate into the groundwater. Partial concretization of Bautista Creek has already decreased possibilities for groundwater discharge. The need is to protect groundwater recharge areas from development wherever possible. As the Valley develops, flood risks may increase as they have in other areas where urban runoff has been totally channelized. Policy:

1. All proposed developments shall include provisions to allow runoff to percolate back into the ground by live landscaping, dug wells, maintenance of natural drainage ways, and other techniques. These standards shall be regulated through City and County subdivision regulations.

Regional Highways. The 1968 Hemet-San Jacinto General Plan recommended an east-west freeway to serve the Hemet area. This would not only cause a decrease in Hemet's environmental qualities, but would add pressures to develop the nearby San Jacinto Mountain area. The same is true for the proposed Bautista Canyon highway which would all but destroy that canyon as an important wildlife habitat.

1. New regional through routes should be discouraged in Hemet for they will, in general, cause a significant decline in environmental quality. Where absolutely essential, such highways should be routed around important open space and conservation resource areas.

Hillside Development. In order to protect the integrity of the hillside areas, the City Council adopted the following Hillside Development Standards on September 28, 1982. (Hillside Development Illustrations are on file with the City Department of Community Development)

1. Grading is to be minimized in all hillside areas. All final slopes are to be contour graded.

2. Developments shall be designed to follow, or flow with, the natural contours of the site. Natural floodways, drainage channels, slopes in excess of 25% and seismic fault zones should be designed as common open space. Density transfers are permitted in order to compensate for the loss of buildable area, with the general plan determining the appropriate density range.
3. The height of all cut and fill slopes, or combinations thereof, (on a 2:1 slope ratio) shall be no greater than ten feet. Exceptions to this standard are permitted when:
 - A. slope ratios can be increased (i.e., 3:1 or 4:1 or,
 - B. a special landscape terracing plan is approved.

Regional Parks. The regional parks would be supplemented by scenic easements, areas where the development rights are owned by the public. Regional parks are indicated for key open space and conservation areas. These are areas that have significant value for preservation and which can be used for outdoor recreation or educational use by the public. Scenic easements supplement the regional parks system in order to preserve the scenic integrity of the Valley (see section on scenic resources). Policies are:

1. The following new regional parks are recommended (in order of priority):
 - a. Bautista Canyon. This includes the canyon area and the surrounding desert culture environment. It could encompass significant BLM holdings on the hillsides above the canyon. It is expected that use of this park would be oriented towards outdoor education and ecological study.
 - b. Pochea Indian Village Site. An investigation is needed to determine how much of the Pochea Indian Village has been lost to development. Whatever remains should be preserved in a park facility.
 - c. Park Hill. This landmark could be largely preserved by having only the top area as a

park. The lower slopes could continue to develop, following the cove-cluster concept with the middle slopes and the more prominent lower slopes preserved as scenic easements.

- d. Highway 74 Scenic Gateway Overlook. As mentioned, the scenic gateway where one first sees the Valley upon entering the Valley via Highway 74 provides a good place for an overlook area. Coupled with a scenic easement, it would preserve the effect of the regional "entrance-way". The overlook could include viewpoints and information about the area.
 - e. San Jacinto River Parks. These are the same parks as recommended in the 1968 plan. There are possibilities for picnicking, riding, bicycling, and wildlife areas.
 - f. Other Significant Hilltops. These could be preserved in the same manner as Park Hill with lower slopes in scenic easements.
 - g. Simpson Park (existing) and the County Park at Double Buttes (planned).
2. Regional hiking, bicycling, and horse trails are recommended along the San Diego Canal right-of-way, and in the riverbottom area.

Energy Conservation. Moderately high density development is the backbone of many energy-conserving land use objectives. Multi-unit buildings cut space heating and cooling costs more than one-half because units are smaller with fewer exposed surfaces that facilitate temperature exchanges. Dense development makes possible the use of total energy systems that reuse water, solid waste, and waste heat produced from electricity. Energy efficient transportation systems are encouraged by locational choices that reflect higher densities and thereby help to reduce the distance between work and residence. These in turn reduce the length of roads and utility systems. Land zoned for multi-family housing creates an economic incentive for developers to create more dense residential environments.

Modifying height restrictions, cluster zoning, landscaping, street design and reducing lot size requirements are additional steps to encourage more dense development within single-family subdivisions. In lieu of imposing blight, setback, and yard requirements to regulate density in larger developments, the floor area ratio (FAR) can allow greater flexibility in building shape and orientation to optimize energy-conserving features of the natural environment.

The substantial energy savings achieved through higher density development have disadvantages in that they can result in congestions, concentration of air pollution, fire hazards, loss of privacy, increased noise, overburdening of capital facilities, and loss of scenic beauty. Safeguards have to be built into implementation strategies to assume a better product. Design changes and construction improvements should accompany compact development, including better insulation to maximize privacy, use of setbacks, and tiered buildings to allow light exposure and air circulation.

While multi-unit development is not prescribed everywhere and cannot be promoted throughout a community, it can be concentrated near employment and activity centers. Alteration of land development patterns to big recreational and other public facilities closer to their users is another way to reduce energy demand. The development of an integrated pathway system for bicycling, jogging, and walking to complement existing and future road development will also reduce energy consumption. Energy is further conserved by narrowing streets, particularly local streets that serve residents rather than through traffic. They can help reduce the ambient air temperature reducing the use and cost of home air conditioning in the summer. Policies are:

1. The City shall develop energy performance standards by which to review development proposals according to the efficiency of site design, orientation of development, wind protection, ventilation, relationship to open space networks and pedestrian pathways and the use of solar, waste water, and solid waste systems to conserve energy.
2. The City shall encourage the development of multi-family housing in appropriate areas of the City and mixed use developments in certain areas.

City Parks. A few years ago the City considered a set of policies which would measure necessary park and recreation areas according to the population. The proposed regulations stated that four acres of land for 1,000 persons would be required for public park and recreational use, but one and one-half acres of each four acres could be provided by open spaces owned by the School District. This conditions, if met, would delegate responsibility for the provision of two and one-half acres per 1,000 people to the developers.

By establishing these plan standards for open space provision, the City can take full advantage of the Quimby Act. According to the Act, the City may require either the dedication of land or a payment of cash in lieu of such dedication for park and recreational areas, where the subdivider-proposed area will meet a park need. However,

as stated in the Quimby Act, the City cannot require dedication of land or payment in lieu unless it "...has adopted a general plan containing a recreational element, and the park and recreation facilities are in accordance with definite principles and standards contained therein." Policies are:

1. As recommended in the Open Space and Conservation Element (1973), a minimum of four acres of property for each 1,000 persons should be provided in the Southwest Area.
2. One and one-half acres of this four acres/1,000 people may be satisfied by multi-use of school playgrounds located in the Southwest Area, if agreed to by the Hemet Unified School District.
3. Fifty percent of the amount designated as private common open space used for neighborhood park-type uses, up to three acres/1,000 population. (This percentage may be calculated only for that population actually utilizing the private common open space.)
4. Portions of the floodway may be improved and used as open space and may satisfy a portion of the recommended standards as long as walking distances are not exceeded, parks are closely related to residential development, and recreational facilities are approved by the Flood Control District.

Neighborhood-Oriented Parks. Recommended new neighborhood-oriented parks are indicated in Figure 3 . These recommendations follow from the analysis of individual neighborhood needs for nearby park facilities (as distinct from community-wide facilities which will tend to draw people from the entire City and its surroundings). Circled notation in Figure indicates approximate areas in which parks should be located. Existing, 1990, and 2000 priorities are determined directly from the neighborhood analysis in which the priority needs are presented.

Recommended parks are broken down into two basic types: mini- and neighborhood parks. Mini-parks are either tot lots, playgrounds, sitting areas, or a combination of all three. Neighborhood parks contain sitting areas, tot-lots and playgrounds as well as other facilities. There are no recommendations for new facilities that would be playgrounds alone. The schools already provide playgrounds and the recommended neighborhood parks will usually provide them. In other cities with more grade school children, these types of facilities usually have to be supplemented with playgrounds. In Hemet's case, this is not necessary.

Within each neighborhood the needs analysis indicates

approximately where different categories of population live and which areas need new parks; the plan map is more specific. Parks recommended near bicycle paths and park location areas are related to the overall development pattern of the neighborhood. This often means locating a new facility on the developing fringe of a neighborhood area where it will serve existing and the future development. The developing fringe area is usually where vacant land is available.

The tentative downtown renewal plan indicates several street closings for malls and walkways. As mentioned previously, this would provide great open space relief for downtown shoppers, but should be subject to a complete and thorough economic feasibility study. In cases where neighborhoods border or include parts of the downtown renewal area, several sitting areas and tot-lots should be located where they could be integrated with future malls. Downtown parks can and should be integrated with neighborhood parks wherever possible, saving on facilities and encouraging people to use downtown.

In determining the design of specific recommended park facilities, the City should use the park descriptions as only a guide. Amenities to be included in a new park should reflect the specific needs of the surrounding area. Plans should include provisions to alter facilities to reflect the changing needs of new populations. Most importantly, there is no certainty as to the long-range (twenty to fifty years) stability of Hemet as a retirement area. New neighborhood parks in retirement areas probably will not need ballfields, but plans for these parks should indicate where these facilities could go in the future, leaving those areas free of major trees and structures.

In reality, each neighborhood park will not be limited to serving its immediate area. The primary design emphasis for each such park should be to serve the needs of the immediate population. To complement the entire city park system, each park should provide something unique. One park might have a special fountain-wading area, or tennis courts, so that the most complete facilities will be available citywide. This would help avoid the tendency in park design of repeating the same designs in every park.

The architectural designs of new parks should also be people-related and somewhat unique for each park. Standard park furniture found so often in city parks everywhere should be avoided where possible. These styles often run from grey steel and concrete to carnival-style play equipment. Emphasis could be placed on natural materials which most people find more appropriate for parks and which are often cheaper. Particularly important is the choice of play equipment. Modern tot-lot and playground design has

moved beyond the stereotyped facility of the past, where the child's actions and imagination are rigidly controlled by the design of the equipment. New play equipment and facilities emphasize the park as a place for adventure and imagination. Natural materials such as sand, wood, and stone provide the basis for a better child-experience. The City need not limit itself to playground equipment catalogues. It can often make its own equipment cheaper and more interesting. The School District should totally reexamine its playground designs. Policies are:

1. Specific neighborhood needs should be considered in the provision of open space and recreational amenities.
2. Development plans for open space and recreation should provide the flexibility to accommodate changes in the types of facilities to meet the needs of changing populations.
3. While the primary design emphasis for each park should be to the needs of the immediate neighborhood, each neighborhood park should be designed to complement the entire city park system by providing a unique amenity.
4. Downtown park needs should be integrated with neighborhood park needs where neighborhoods border or include parts of the downtown renewal area.
5. The following standards shall apply to the location and size of the recreational amenities:
 - a. Sitting area, tot-lot, or Playground one-fourth mile walking distance - may be part of a Neighborhood Park
 - b. Neighborhood Park one-half mile walking distance
 - c. Community Park 15-minutes driving time or within the floodway
 - d. Adults over 60 one-fourth mile walking distance to all passive recreational areas
 - e. Sitting area, tot-lot, or Playground one-half acre or less
 - f. Neighborhood Park 5 to 10 acres

g. Community Park

20 to 40 acres

Bike Paths. The proposed park system and the bike paths would complement each other and should be jointly implemented in newly developing areas. The bicycle paths would be linked to the parks, providing additional resting areas. Policies are:

1. Wherever possible, new parks shall be located where they can be served by the proposed bicycle pathway.
2. The bicycle pathway system should consist of the following elements and each should be studied in terms of its need in the systems:
 - a. Separate lanes for bicycles only.
 - b. Areas where joint use would occur.
 - c. Rest stops for cyclists.
 - d. Signing - directional, regulatory and informational.
 - e. Bicycle parking areas.
 - f. Striping, curbing, and other methods of defining separation from other modes of transportation.
 - g. Off-street or right-of-way bicycle paths.
 - h. Ramps, curb-cuts and other methods of transition between various types and locations of lanes.
 - i. Signals and other devices related to the control of conflict points within the system.

Downtown Plazas-Malls. It is apparent that given the predominant life styles of Hemet, an extensive system of downtown mini-parks and plazas would be popular. The feasibility of plans incorporating downtown mini-parks and plazas should be evaluated in an economic analysis of the downtown retail area, its strengths and weaknesses compared to competing areas, and a determination of what kinds of improvements would significantly increase its retail drawing power. Policies are:

1. Well-lighted park facilities should be encouraged in order to facilitate nighttime use.
2. Recreation hall facilities are encouraged adjacent

to park areas and in areas where private recreation hall facilities are not available.

3. A system of downtown mini-parks and plazas is encouraged as warranted by intensification and expansion of the downtown commercial core.

Urban Fringe. The principal need in the urbanizing fringe area is for inhabitants in those areas to realize the absolute need for a united, locally-based planning effort if the Valley is to be saved from inadequately planned development. As previously discussed, the City of Hemet is the only local agency available to undertake the necessary leadership for the planning job that needs to be done. Incorporation of the principal fringe areas into Hemet would introduce locally-based planning to the fringe areas. Further, the expanded City would represent a greater share of the Valley's population, enabling the City to carry more weight as the County's local spokesmen in future land decisions facing Hemet and the regional area.

New development in the urbanizing fringe area should follow the environmental review procedures and checks discussed earlier. New developments in these areas should also provide for an extension of the Hemet City park system. Hemet's bicycle path system should be extended to all urbanizing fringe areas, and neighborhood-oriented parks located at points along this system where park needs exist. Park locations should follow from the same criteria developed and demonstrated in the Hemet City Plan. Policies are:

1. New development in the urbanizing fringe area should be reviewed for potential environmental impacts based on the environmental inventory and analysis of the Hemet area maintained and impacted by the City.
2. New developments in the urbanizing fringe area should include open spaces that augment the Hemet City park system, provide for the extension of the City bicycle path system, and follow the same locational criteria developed for the City.

Community-wide Park. It appears that while the existing school facilities in the eastern fringe areas are meeting many of the park needs in that area, more park facilities are needed. In addition to several neighborhood-oriented parks (exact plan to be determined through future plans), there is a need for a community-wide facility.

Such a facility is about thirty to forty acres and is aimed at serving the entire community, but specifically the afternoon family outing, the group picnic, the league ball game, or the class outing. It includes expanded neighborhood

park facilities (ballfields, picnic areas, and tot-lots). It can also include other facilities such as nature areas, a museum, and a community center. The community park should be within fifteen minutes driving time of user population concentrations. A need exists for a community park for the following reasons:

- 1) The only local place that is attractive for family outings, group picnics, etc. is Weston Park which is heavily utilized. A considerably larger community park with more diverse facilities would relieve Weston Park, while providing more recreational opportunities.
- 2) The "family" areas, in particular, have too few recreational facilities, particularly for the family and outing type of activity.
- 3) There will be a long-term need in the area for lighted active sports areas. The school grounds cannot adequately respond to this need. Facilities should be designed especially for nighttime use; they were not originally designed for these purposes. There aren't enough school facilities to meet the long-term needs of the area even if the high school and other school ballfields were lighted.

There is also the need in the community for an outdoor educational facility whereby school children and others could study the diverse open space and natural resources of their Hemet area environment. Detailed in this report is the diversity of existing wildlife, vegetation, geology, soils, and land forms, as well as extensive areas of considerable archaeological interest. Unfortunately, many of the nearby areas are not accessible during fire season except to organized and specially approved groups. An outdoor educational facility would provide a place where all residents could learn about and study their environment first-hand.

It would be desirable to locate the outdoor educational facility and community park on the same site. Both would relate primarily to family areas and should therefore be located east of Hemet where there are still large vacant areas for such uses. The park should be owned and operated by the Valley-Wide Recreation District as it will directly serve the fringe area as well as Hemet. Both amenities could benefit through combined use - park users may enjoy a nature trail; school children could use the athletic facilities. The community park could include the following facilities and areas:

- 1) Active lighted sports area
- 2) Picnic area
- 3) Small lake
- 4) Riding and bicycling trails

- 5) Playground
- 6) Multi-purpose community center

The outdoor educational facility could include the following facilities and areas:

- 1) Nature study area.
- 2) Interpretive center for the study of local ecology and archaeology coordinated with use of Simpson Park, Bautista Canyon and the Ramona Bowl Museum.
- 3) Wildlife Lake (could be shared with community park area if adequately designed and maintained for both uses).

Policy:

1. The Valley-Wide Recreation District should be encouraged to provide a community park, equipped with an outdoor recreational facility(ies) and other park facilities that serve the recreational needs of the full range of age groups in residence in Hemet and the urbanizing fringe area.

Implementation

Priorities. The highest priorities of the open space and conservation element are:

- 1) the provision of neighborhood parks in the southern portion of Hemet to satisfy existing needs, and
- 2) the provision of neighborhood parks in the Southwest Area to satisfy future need as the area develops.

The Southwest Area of the City has the largest population unserved by a large neighborhood public open space and the number of people living in that section of the City is increasing. A prime location for a neighborhood park in this area is near the intersection of Stetson and State Streets. As the Southwest Area develops, adequate open space will also be necessary as part of the master plan for development. Of secondary importance are smaller mini-parks, with tot-lots, sitting areas or playgrounds. They are desirable amenities, particularly in existing developed areas of the City to supplement neighborhood park facilities. Community and regional parks have the lowest priority for City action. At present, the Valley-Wide Recreation District for the County is acquiring land north of Hemet near the intersection of Esplanade and State Streets for future development of a 40-acre community park. The City maintains control over development of Sampson Park, a regional facility,

over 450 acres of vacant land five miles southeast of the City. The City Parks and Recreation Department submitted a five-year development plan to the Bureau of Land Management (BLM) to provide water to the site and improve access and minor improvements.

Program of Action. These programs and actions establish a means of guiding the development of open space and conservation areas. They help build a stronger consciousness for the preservation of valuable natural resources and the pursuit of well balanced growth. Implementation of the plan requires both public and private initiative and cooperation, employing a variety of implementation techniques. The actions described below are organized by regional, city, and fringe planning areas.

The implementation strategies for the City and urbanizing fringe area are combined to further encourage the same planning approach in both areas. Those actions that are related to the acquisition of neighborhood open space are highlighted (*) to indicate priority areas with direct action for the City and the private sector.

1. Hemet should assume its role as the leading voice of local people for the entire planning area. The planning staff should be increased to where it could undertake the necessary studies of establishing and updating a broad base of environmental knowledge and information about the area as outlined in the plan.
2. The City should expand its role as advisor to the County and the Valley-Wide Recreation District in their impact on issues affecting the planning area.
3. The proposed regional parks should be accomplished over the years, principally through federal, State and County resources.
4. The proposed scenic easements should be encouraged through the utilization of a Planned Unit Development Zoning Regulations and Hillside Density Transfers.
- *5. In order to encourage the provision of private and public open space as part of private development (to help meet the overall need for open space and recreational facilities), the City encompasses the adaption of flood control channels and floodways in private developments for multi-purpose use as open space and recreation.
- *6. The City shall continue to encourage the use of

the "Park Subdivision" ordinance which provides for private open space by permitting a higher density than would normally be allowed. The open space and recreation requirements as per ordinance, are as follows:

Community recreation and service areas containing clubhouse, recreational area for outdoor games and activities such as shuffleboard, horseshoes, putting greens and swimming pool, shall be shown on the plans and specifications. Location and size of all facilities indicated in this paragraph must be approved by the Hemet Planning Commission and the Hemet City Building Department. There shall be a minimum of 270 square feet per lot of recreation area, exclusive of any lot, provided within the park subdivision. The clubhouse shall have a floor area of not less than twenty-five (25) square feet per residential lot, and shall include adequate kitchen, restroom and storage facilities therein.

- *7. The City shall continue to encourage the use of the special zone for mobile home subdivision known as the TR-20 zone and the mobile home park zone requiring the same basic community recreation facilities as the park subdivision.
8. The City shall continue to review all new development proposals in both urbanized areas and undeveloped areas to provide for the conservation and enhancement of the environment and to insure that sites are developed with due regard for the aesthetic qualities of the natural terrain and landscape and that trees and shrubs are not indiscriminately destroyed.
9. Formulate a joint-use agreement with the Hemet Unified School District for use of their park system.
10. Adopt zoning regulations for large lot zoning in existing agricultural areas to help preserve visual open space in agricultural uses.
11. Adopt an ordinance to allow no subdivision of hillside lands in parcels smaller than the adjoining lots.
12. At such time that downtown redevelopment is considered, the redevelopment law can be used to encourage the provision and integration of downtown park facilities within the total park system.
13. The City should work with the Valley-Wide Parks and Recreation District on the programming and

design of the community park to ensure that it is integrated into the City open space and park system and meets the needs of the Hemet area.

- *14. The City should rewrite the subdivision ordinance to consolidate park and recreation fees.
- *15. The City should investigate and establish means to supplement the present development fee for public open space, including an increase in development fees, development excavations, and incentives, the use of open space easement and funding from County, regional, State, and federal sources.
- *16. The City shall require each developer to identify in the development plan all slopes above 25 percent for the purposes of protecting hillsides beyond 25 percent slope.

I V
T H E
N A T U R A L
E N V I R O N M E N T

THE NATURAL ENVIRONMENT

Climate

Climate has been an important factor in making Hemet an agricultural center and later a major retirement area. It is a factor about which little can be done locally; however, because of its impact upon land use, it deserves critical attention.

There are really two climates within the Hemet planning area. Both are classified as interior climates, for the major climate influence is that of the Continental Air Mass, with the ocean determining the climate no more than fifteen percent of the time. The milder of the two climates in the Hemet planning area is that situated on the slopes and hillsides where cold air drains off on winter nights. The other climate is situated in the valleys (cold air basins) and on the hilltops, just below and above the thermal belts which form the milder climate. Differences in low temperatures in the two climatic areas are five to six degrees. Rainfall in the two areas is virtually the same.

The overall climate in the San Jacinto area is defined as semi-arid. Yearly rainfall averages 12.81 inches. On the average, nine inches, or seventy percent of the total, falls in the four months, December through March. According to the State Climatologist, the average temperature in the area over a period of a year is 62.4° . The average high is nearly 99° in July and the low is 34.5° in January. The prevailing winds are from the southwest and, according to the Riverside County Department of Development, the mean hourly speed is nineteen miles per hour.

Climate and Land Use

Climate in the Hemet area has had a great effect on land uses. The climate, in combination with fertile soil, enabled the Hemet area to develop as a prime agricultural center. In terms of agricultural climate, the two zones mentioned earlier are important. It has been found that citrus production is more successful in the air-drained thermal belts than on the valley floor. In fact, it is said that the microclimate in the Bautista Canyon area is such that it is the only place in the United States where grapefruit is known to be harvested in the summer.

Climate has been one of the most important causes of Hemet's

development as a retirement community and as a mobile home mecca. Some of the main attractions to the new elderly citizens are the warmth, dryness, and sunniness that are characteristic of most of the year.

In both arid and humid climates precipitation is fairly regular on a seasonal and yearly basis. In semi-arid climates, such as Hemet, precipitation is highly seasonal, and the actual rainfall itself tends to occur as sudden downfalls. Furthermore, on a year-to-year basis there are recurring periods of drought. With regards to slope stability, vegetation normally serves to hold soil and control runoff from precipitation. The frequency and nature of the rainfall in semi-arid climates causes a precarious balance where factors such as a few dry years or overgrazing can cut down on vegetation and make slopes highly susceptible to erosion or slippage. Likewise, any kind of development on slopes that would significantly increase runoff might create more runoff than could be controlled by native vegetation.

The effect of land use upon the climate has not been nearly as dramatic as the reverse. It is probable that the irrigation of vast acreages has increased the humidity of the area somewhat.

Geology

The Seismic Safety Element of the General Plan, which is both mandated by the State and of extreme importance to the seismically active Hemet planning area, delves into the subject of geology in greater depth. The Open Space Element legislation specifies that that plan shall delineate "open space for public health and safety, including, but not limited to, areas which require special management or regulation because of hazardous or special conditions such as earthquake fault zones, unstable soils areas..."

In larger geographic terms, the Hemet planning area lies east of the Coastal Plains in the northern part of the Peninsular Ranges. To the north are the Transverse Ranges and to the east the San Jacinto Mountains. San Jacinto Mountain, rising to a height of 10,831 feet above sea level, lies northeast of the valley floor of the Hemet planning area and is the highest peak of the San Jacinto Range. The range and adjacent highlands, gradually decreasing in elevation from San Jacinto Mountain, border San Jacinto Valley on the north and east. On the west and south the area is surrounded by low hills of crystalline rock. Alluvium, which extends to great depths in some places, covers the

valley floor. The elevation of the valley floor varies from about 1,400 to about 1,700 feet above sea level. Above the floor, isolated masses of granitic and metamorphic rock rise to elevations of 2,500 feet. Located at the juncture of the valley floor and the San Jacinto Mountain Range is the San Jacinto Fault Zone. This fault zone, which is composed of a number of active faults, is generally considered to be a southern branch of the San Andreas Fault.

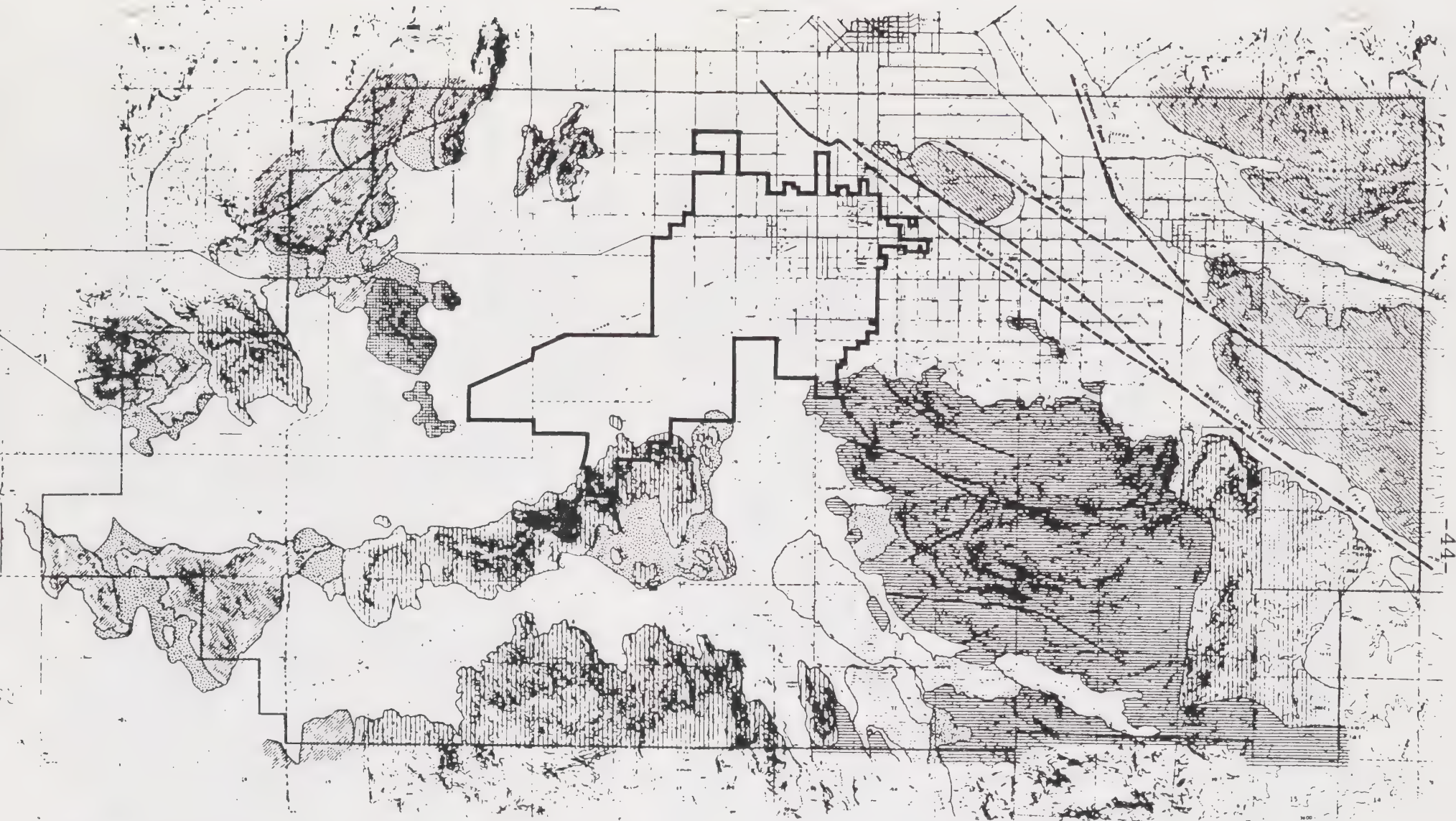
Although the geology of the Hemet planning area is extremely complex, at least a rudimentary knowledge of it is necessary to the understanding of many conservation-related issues such as water resources or ground stability. The following three sections describe the geology in detail. Generalized geology is summarized on Figure 4 .





Geomorphology





Two major geomorphic divisions make up the Hemet planning area. These are the San Jacinto Mountain Block on the east and the Perris Block extending from the San Jacinto Fault Zone westward to the Elsinore area.

The San Jacinto Mountain Block is a recently elevated mass which is probably still rising. There are indications that erosion of the block was interrupted by at least three marked periods of more rapid uplift, the first of which elevated the block nearly 3,000 feet, the second, approximately 2,000 feet. The last period of active uplift, which is continuing at the present time (as evidenced by entrenched streams and recent earthquakes), elevated the mountain mass from 2,000 to 3,000 feet above San Jacinto Valley. The streams draining the southwest slope of the San Jacinto Mountain Block generally occupy deep, steep-walled canyons. The gradient of many of these streams, such as the north fork of San Jacinto River, increases with decreasing elevation indicating very recent strong uplift along the northwest trending mountain front faults.

The Perris Block is a relatively stable block of crystalline rock cut by interconnected valleys which are deeply alluviated. The dominant geomorphic process affecting the block in the recent geologic past has been slow erosion of the highland masses and consequent building up of the valley fill. This fill has been built up to a constant elevation by streams bringing in matter from higher elevations. These streams have shifted position from time to time as shown by the presence of abandoned channels in certain places. Perhaps the prominent of these is an abandoned distributary of Bautista Creek which skirts the north edge of the crystalline highlands southeast of Hemet and crosses State Street into the lower end of Diamond Valley. South of Park Hill,



-  Mt. Eden, San Timoteo, Bautista Formations
-  Undifferentiated Granitic Rocks
-  Undifferentiated Metamorphic Rocks
-  Tonalite, Granodiorite

-  San Marcos Gabbro
-  Older Alluvium
-  Serpentine
-  Residuum






-  Alluvium
-  Fracture
-  Major Fault
-  City Limits
-  Planning Area Boundary

Figure 4

GENERALIZED GEOLOGY

(Source Owen Menard)

0 5,000 10,000
SCALE



a braided pattern of abandoned stream channels has been preserved. The trenching of alluvial deposits near the highlands of the Perris Block has resulted in the formation of terraces in several places, notably in upper Diamond Valley-Cactus Valley.

Geologic Formations

In general, the Hemet basin is surrounded and underlain by nonwater-bearing formations. Surficial alluvial deposits are deep in many areas and are of varying water-bearing capacities, depending upon their sand and silt contents.

Sedimentary Rocks. The Mount Eden, San Timeteo, and Bautista formations are the only sedimentary formations in the Hemet planning area which are classed as nonwater-bearing. They consist of continental deposits of Pliocene and Pleistocene Age and underlie large areas to the east of Hemet, on the east side of Bautista Canyon, and including Park Hill. These formations have many similarities. They are composed almost entirely of poorly consolidated sandstones and conglomerates and sands and gravels often containing much silt and/or clay. Landslides have been identified in these formations in areas to the east of the planning area up San Jacinto Canyon. No inherent problem of instability with these formations have been identified within the study area. Stability of these and other formations could be greatly affected, however, by nearby fault zones. These will be discussed in a later section.

Metamorphic Rocks. The metamorphic rocks are the oldest exposed in the Hemet area. They occur only in the southern and western part. The metamorphic rocks are schists and gneisses of the Paleozoic Era. They are exposed to the hills north and south of Winchester; the eastern butte of the Double Buttes consists of this formation. These rocks also occur in the mountains to the north and south of Diamond Valley and to the south of Bautista Canyon. There are no known inherent problems of instability with these formations.

Igneous Rocks. Most of the igneous rocks of the Hemet area are plutonics, meaning that they have solidified far below the earth's surface. Of these the major groups are the tonalites, granodiorites, and undifferentiated granitic rocks. The most striking characteristic of these rocks is their mode of weathering. All form huge boulders which readily identify the areas they underlie. These formations are evident in the Santa Rosa Hills just to the south of Hemet, in the Lakeview Mountains, and in the hills to the north and south of Domenigoni Valley. Another type of granitic rock which is found in the planning area is San Marcos Gabbro. Dittrich Hill to the south of the Lakeview Mountains is composed of this material, as are several

small buttes in the area. Unlike the formations discussed earlier, the San Marcos Gabbro does not form boulders. The only other igneous rock in the planning area is serpentine which occurs in a small area of the hills to the north of Diamond Valley. Locally occurring igneous formations have not indicated any inherent stability problems.

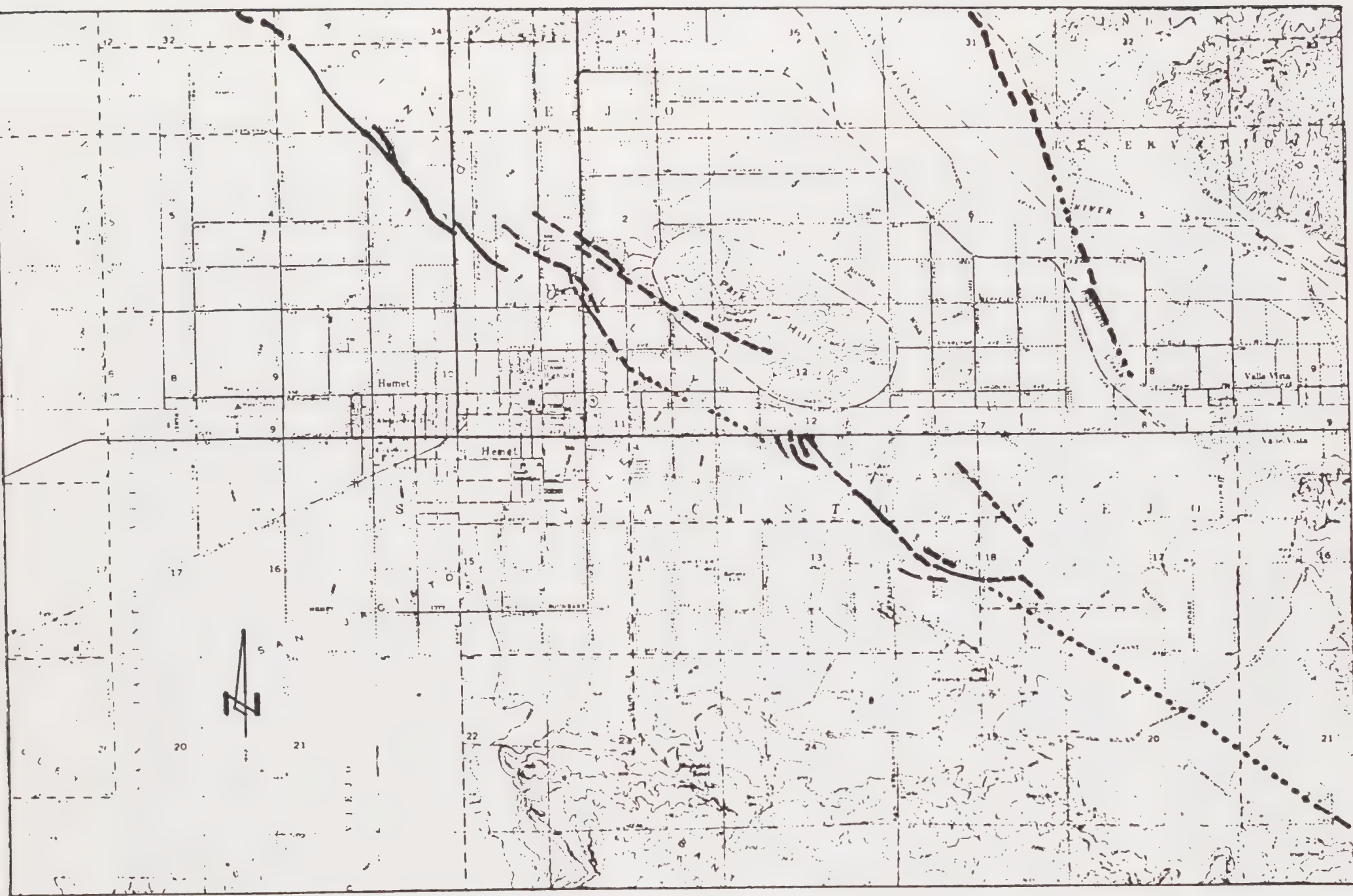
Alluvium. The water-bearing group is classified simply as older alluvium and recent alluvium. The older alluvium makes up the terrace deposits which were mentioned earlier. The age of these deposits is generally considered to be Pleistocene. Within the zone of weathering, older alluvium generally contains a relatively high percentage of residual clay resulting from the breakdown of the original minerals. The deposits are characterized by reddish-brown color due to oxidation and are quite low in permeability.

Recent alluvium covers most of the valley floor. This alluvium fills the bedrock basins of the area to great depths, and in these sediments occur most of the groundwater which is available for pumping. The alluvium is composed of a complex of sands, gravels, silts, and clays, and includes all conceivable combinations of and gradations among these sedimentary types. Some sands and gravels are fresh and clean, and these are the most prolific water-producing sediments. Other sediments were poorly sorted when laid down and contain a high percentage of finely textured material. Still others were subjected to long continued weathering before being buried and now contain a high percentage of residual clay.

Structural Features

Geologic features which have played a prominent role in the development of the Hemet area, and which are still shaping the area and influencing the distribution of its water resources, are the faults indicated on Figure 5. Most of these faults are part of what is called the San Jacinto Fault Zone. Recent movement is shown in the topography of fault scarps, land slides, truncated spurs, and fissures. Movement of the faults was dramatically experienced in the earthquakes of 1899 and 1918 which centered in this region.

The first of these quakes occurred on Christmas morning, 1899, and was described by the Riverside "Press and Horticulturist" of December 30, 1899, as occurring "without any preliminary rumbling at 4:23 o'clock.... The undulations were from northeast to southwest and the temblor may be said to have been confined to the region lying between the mountains on the northeast and Perris in the opposite direction. The damage to the brick blocks was the same in nearly every instance. The south walls invariably went down, most of them falling outward...."



SAN JACINTO FAULT ZONE

Hemet Area

Figure 5

- Known Fault
- - - Approximate Fault
- Concealed Fault

Scale: 1 Inch = 4000 feet

Source: State of California
Special Studies Zones
Jan. 1, 1980

A second destructive quake occurred in Hemet on April 21, 1918. At this time, buildings were destroyed and paved streets were cracked. Fissures appeared in the fields and along the roads, and landslides occurred in the Bautista sediments. The Los Angeles Times of April 23, 1918, states, "There were nine separate temblors over a period of thirty hours, beginning Sunday at 3:32 p.m."

The San Jacinto Fault Zone crosses the northeast corner of the planning area in a northwest to southeast direction. In general, it separates the San Jacinto Mountains from the valley floor. Different geologists have given different names to the faults which make up the San Jacinto Fault Zone. For the purpose of this study, they will be called the Claremont Fault, the Park Hill Fault, the Casa Loma Fault, and the Bautista Creek Fault. The location of these faults within the planning area is indicated on the geologic figure 5 .

Claremont Fault. In the Hemet area, the most prominent fault in the San Jacinto Fault Zone is the Claremont Fault. It follows the base of the mountain along San Jacinto River until it reaches the mouth of Poppet Canyon. In this area, it apparently turns in a more southern direction and extends approximately along the channel of Bautista Creek until it intersects the Park Hill Fault south of Valle Vista. Vertical movement along the Claremont Fault is shown by the presence of the older formations northeast of the fault at higher elevations than the younger alluvium to the southwest, and by imposing southwest-facing scarp north of the City of San Jacinto.

It is also probable that some horizontal movement has occurred as this fault is a branch of the San Andreas system, along which recent movement has been horizontal. In addition, the generally straight line of the fault typically indicates horizontal movement.

Park Hill Fault. The fault bounding Park Hill on its northeast side is called the Park Hill Fault. This fault is believed to extend across the alluvium to the southeast along a northwest-trending canyon present between Bautista Creek and San Jacinto River. It joins the Claremont Fault just before entering this canyon.

Casa Loma Fault. A low, irregular, northeast-facing scarp extends from Park Hill to the northwest beyond Casa Loma Hill. Its irregular form suggests a stream cut escarpment rather than a fault scarp; however, two deep trenches across it about two miles apart each exposed a fault at its base. In addition, the hydrologic effects of the fault are marked. The irregular direction of the fault scarp is evidence that the Casa Loma Fault moves vertically. Major

movement on other faults in the area is horizontal. The major significance of the Casa Loma Fault is that it forms a barrier to movement of groundwater. This will be discussed further in the section on Groundwater later in this chapter.

Bautista Creek Fault. The Bautista Creek Fault is located southwest of Park Hill and extends to the southeast into Bautista Creek Canyon. Southwest of Park Hill the fault may be double, for truncated spurs occur right at the base of the hill on the southwest side; however, the effective groundwater break appears to be about a quarter mile farther to the southwest. The Bautista Creek Fault meets the Casa Loma Fault near the western end of Park Hill. From the map the two faults appear to be extensions of each other, but there are dissimilarities. Like the Casa Loma Fault, the Bautista Creek Fault is believed to form a barrier to movement of water.

Minor Fractures. A number of minor fractures cutting crystalline rock are shown on the map. Only the most noticeable and persistent of many fractures in the granitics southeast of Hemet are shown.

Geology and Land Use

Movement Along Faults. Movement along faults may take place either rapidly, as in an earthquake, or gradually. In either instance a structure straddling a fault will be severely damaged; and, in the case of an earthquake, structures throughout the area may potentially suffer damage. In the latter case, the amount of damage sustained depends on a number of factors including intensity and duration of the shock, distance from the epicenter, type and age of structure, and the geologic foundations upon which the structure sits. Those on loose alluvial material will be more severely shaken than those on rock. Since most of the valley floor in the Hemet area is composed of deep alluvial fill and most development is on the valley floor, it can be expected that earthquake damage will be widespread. The Seismic Element discusses the extent of these fault zones.

Landslides. As mentioned previously, none of the geologic formations as they exist in the study area indicate inherent problems of instability, i.e., landslides, slippage, etc., due to reasons other than outside factors such as earthquakes. The same sedimentary formations as are found in the study area have, however, evidenced landslides in areas to the east of the study area. The sedimentary hillsides in the study area have not yet experienced very much urban development. This development typically increases both surface runoff (due to building and pavement coverage

of ground areas) and increased groundwater recharge (due to lawn irrigation). While the sedimentary slopes are presently stable, their potential for slippage and landslides should be investigated in more detail before any significant development takes place in these areas.

Groundwater. Ease of obtaining and replenishing groundwater, as well as its mineral content, are directly tied to the geology of an area. These factors dictate the location of certain agricultural crops and the need to preserve areas for groundwater recharge (discussed later).

Economic Mineral Deposits

No mineral deposits of great commercial importance have been discovered in this area. At one time there was a silica mine on Polly Butte south of Hemet. The material was hauled to San Jacinto where it was ground. Another former economic enterprise was the mining of limestone in Bautista Canyon. Rock from this area was hauled to San Jacinto and ground for use in chicken feed. A third type of mineral deposit of some economic value is the serpentine formation in the mountains to the north of Diamond Valley.

Sand and gravel pits have been developed in several areas. These have generally been at points where canyons leave the hills and emerge into the valley. Sand is also found in the San Jacinto riverbed.

Soils Capability

For purposes of determining the natural resource value of various soil types, the capability classification system of the U.S. Soil Conservation Service was utilized in conjunction with the SCS soils report for the Hemet area. The eight basic soil classifications are defined by the SCS as follows:

Class I soils have few limitations that restrict their use.

Class II soils have moderate limitations that reduce the choice of plants or that require moderate conservations practices.

Class III soils have severe limitations that reduce the choice of plants, require special conservation practices, or both.

Class IV soils have very severe limitations that reduce the choice of plants, require very careful

management, or both.

Class V soils are not likely to erode but have other limitations, impractical to remove, that limit their use largely to pasture, range, woodland, or wildlife. (None in the western Riverside area.)

Class VI soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife.

Class VII soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife.

Class VIII soils and land forms have limitations that preclude their use for commercial plants and restrict their use to recreation, wildlife, or water supply, or to esthetic purposes.

Capability grouping shows, in a general way, the suitability of soils for most kinds of field crops. The groups are made according to limitations of the soils when used for field crops, the risk of damage, such as erosion, and the way they respond to treatment. Roman numerals designating the capability classes indicate progressively greater limitations and narrower choices for practical use. In many instances, the capability limitations found in higher numerical classifications can be overcome by conservation (erosion control) activities. The question, of course, is one of economic feasibility. Furthermore, the classifications do not apply to horticultural crops or other crops requiring special management.

In order to simplify mapping, the eight classifications have been further grouped into three major categories:

Prime Agriculture (Classes I and II) - This is the definition of prime agricultural areas used in the State statutes on agricultural preserves. Generally, any crop that can grow in the climate will grow here without any significant conservation practices required.

Moderate Limitations (Classes III and IV) - Significant conservation practices required. Intensive cultivation usually feasible only in periods of relatively high agricultural prices.

Severe Limitations (Classes VI, VII, and VIII) -

Need many conservation methods. Normally, Class VIII is not utilized for agriculture, but there are exceptions.

Soil capabilities for the Hemet area are shown on Figure 6. Figure 6 indicates that the entire City of Hemet, except for a small southeast corner, is located on prime agricultural land. This prime soil area extends to cover most of the valley floor to the north, east, and south, but the valley areas to the west generally fall within the second grouping.

In general, the Hemet area groundwater basin has been overdrawn. This has caused many areas that were once water-laden to be drained. There have been at least several instances in agricultural areas around Hemet where soils have sunk into the ground, forming depressions of approximately twenty feet in depth. These occur in areas that have been drained by groundwater withdrawal and then subjected to irrigation. The irrigation water fills voids in the drained material, compacts it, and causes it to collapse. Similar conditions have also been reported in the City of Hemet where several large buildings have reportedly sunk several inches in recent years. This is discussed in the Seismic Element.

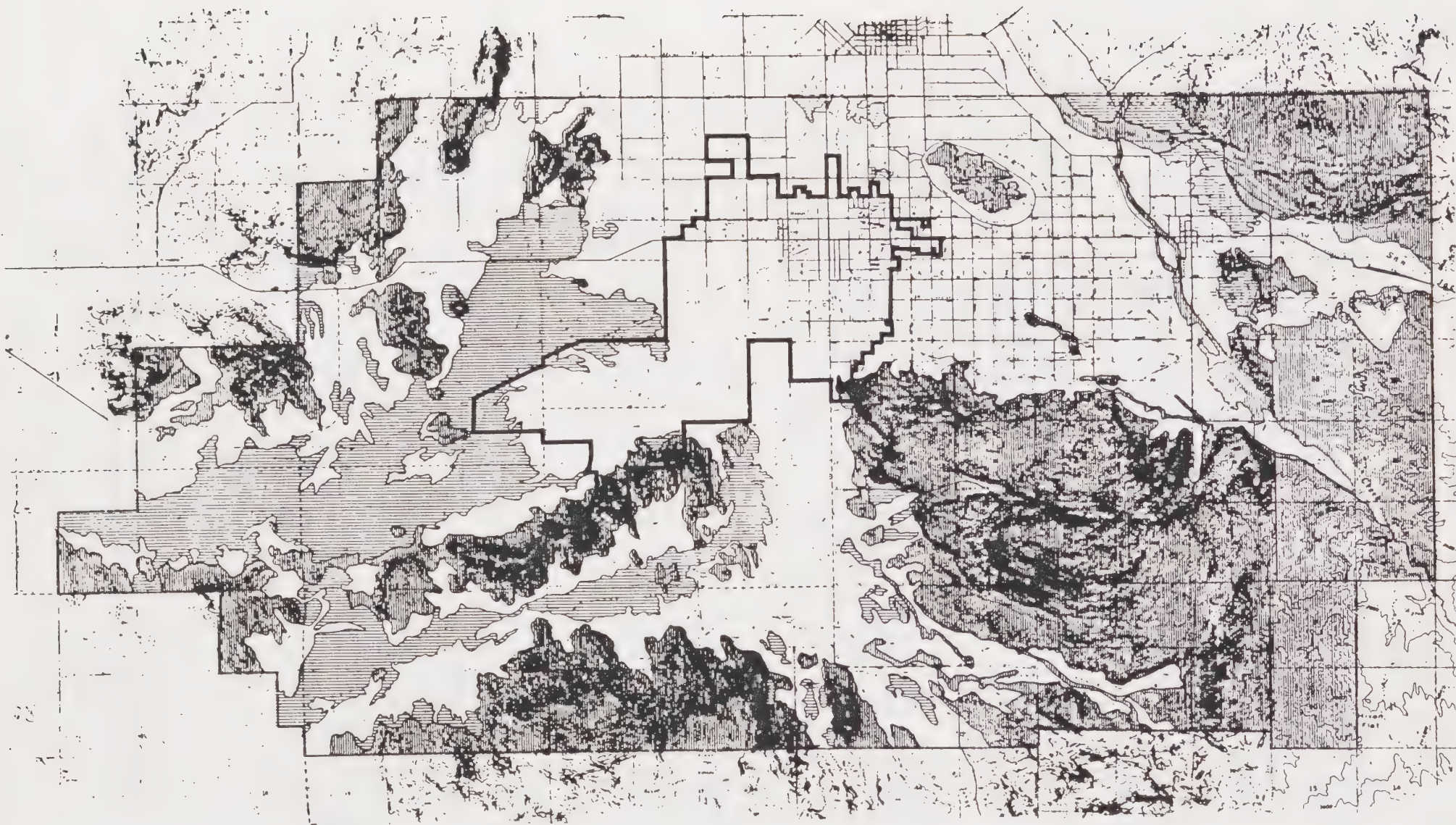
Soils and Land Use

Prime agricultural areas are generally the easiest to develop for urban uses. They are relatively flat alluvial areas, usually well-drained and easy to excavate. In many areas such as Hemet, urban growth occurs at the expense of prime agricultural soils.

The problem of collapsing soils should be given more consideration in land use decisions. Given the continued lowering of water table and the ongoing urbanization of agricultural areas, the subject warrants more detailed investigation. Residential areas can cause collapsing, as mentioned previously, through the heavy irrigation of lawns. Larger structures, such as commercial developments, can have problems as experienced in Hemet where the soils do not give adequate support. As outlying areas become developed, special detail must be given to soils investigations in order to predict these problems and either engineer to meet them or modify site locations.

Slopes

The slope of the land is important in a study of conservation and open space for it relates directly to the types



- CLASS I & II (prime agriculture)
- CLASS III & IV
- CLASS V-VIII

Figure 6
SOILS CAPABILITY

(Source Owen Menard)

0 5,000 10,000
 SCALE



and intensities of land uses and to the possibilities of landslides and erosion. In planning, slopes are described in terms of percent slope. The slope analysis map of the Hemet planning area (Figure 7) shows land in three slope categories: under twelve percent, twelve to thirty percent, and thirty percent and over. The major part of the planning area is in the lowest category. This includes all of the valley floor and certain hill areas such as Gibbel Flat in the Santa Rosa Hills and Park Hill. The steepest areas within the planning area are the hills to the east of Rinehart Canyon in the northwestern part of the planning area, Double Butte near Winchester, the range of hills to the north of Diamond Valley, and the slopes on the southwest side of Bautista Canyon.

Although some slope is generally required for a landslide, slope angle per se is not a measure of slope stability. In fact, the steepest slopes may be more stable than gentle or moderate ones. Steep slopes may reflect the high strength of the earth materials present in relation to the types and amount of energy available to cause slope failure. Furthermore, slopes of strong materials often shed a constant skin of debris, rather than large blocks or massive landslides. One study has indicated that the greatest number of landslides occur on slopes ranging from twenty-seven percent to seventy percent slope with few occurring below nine percent slope or above seventy percent.¹ Slopes within this range should be looked at fairly closely in relation to other factors such as the geologic structure and the vegetation. As mentioned earlier, although there have been no significant tendencies to landslides reported in the area, this could change once more of the hillsides become urbanized. Specifically, the hills that form the San Jacinto Canyon could be further investigated along these lines.

The incidence of erosion can usually be correlated with steep slopes. As Figure 6 indicated, soils with the greatest tendencies for erosion are located on hillsides. Soils on hillsides are generally shallow, plus the gradient can create erosion problems, particularly when an area is developed and surface runoff increases.

Slopes and Land Use

Generally slopes above twelve percent are very difficult to develop or to put into an agricultural use, and slopes above twenty-five to forty percent (depending on the source

¹California Division of Mines and Geology, Report prepared for the U.S. Department of Housing and Urban Development, Regional Landslide Prediction, June, 1971.

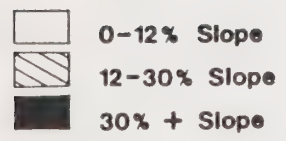
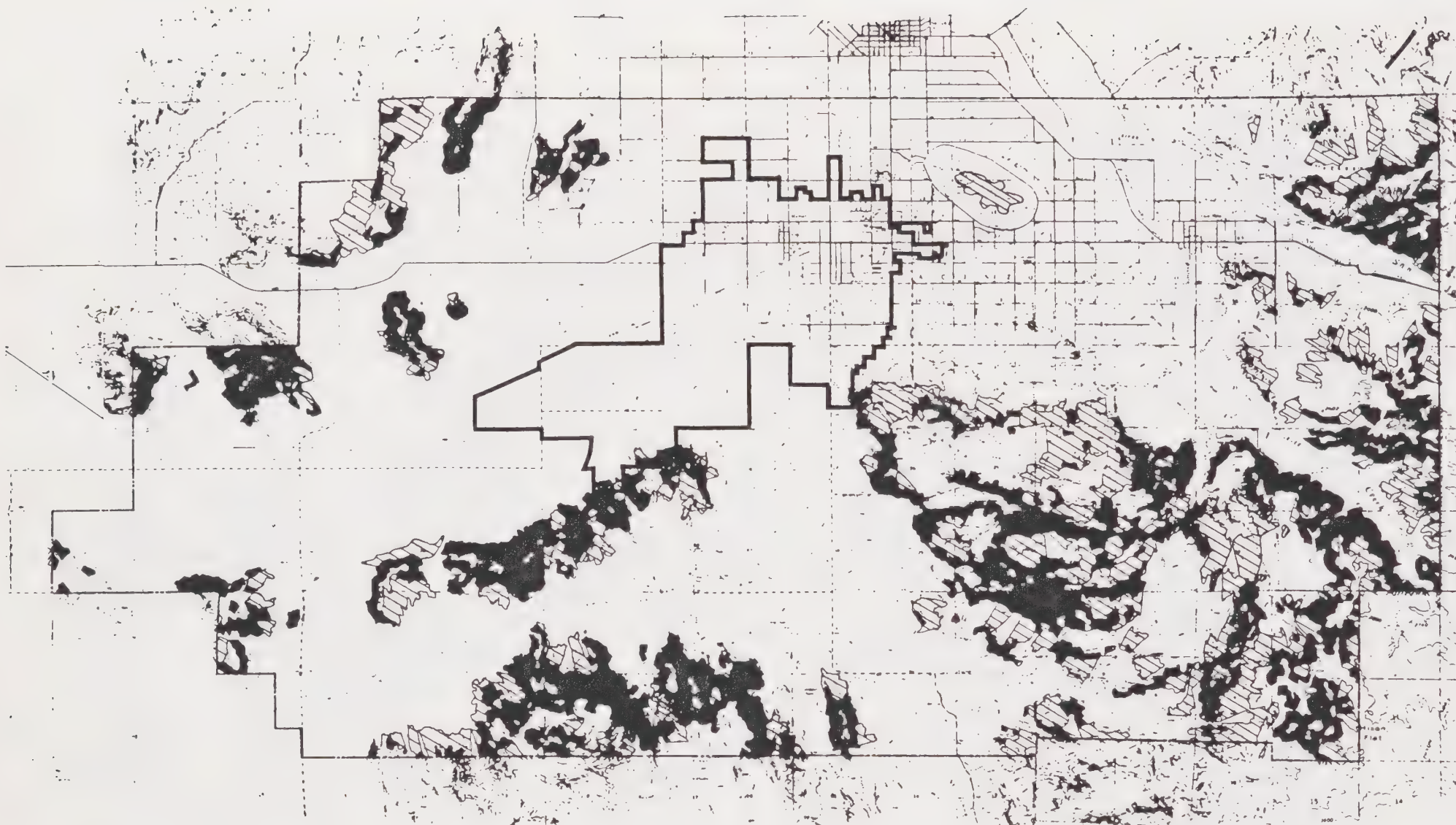


Figure 7
SLOPE ANALYSIS
(Source Owen Menard)



being cited) are too steep for any type of development.

In using new building techniques such as cantilever methods and pilings, it is possible to develop almost any area, no matter how steep. These methods are expensive, however, and require expert design. In addition, there is still the problem of access to developments in steep areas. Steep slopes require severe grading and cutting in order to make them negotiable by ordinary motor vehicles. These processes are expensive and leave extensive scars on the face of hills. Furthermore, as discussed earlier, urban development increases surface runoff and can aggravate erosion tendencies.

Because of all the factors mentioned, the types of land use which are feasible in hilly areas are extremely limited. Those considered to be most suitable, but not necessarily on the steepest slopes, are residential, parks, and some types of orchards or groves.

Water Resources and Supply

The subject of water resources is the most complex of those related to the Hemet Conservation Element. In order to study it, it is necessary to look not only at the Hemet planning area, but at the total drainage area of the San Jacinto River. This comprises about 730 square miles ranging from the top of San Jacinto Peak to below Railroad Canyon Reservoir near Elsinore and includes most of the planning area. A small portion of the planning area, that including Diamond Valley, Domenigoni Valley, and the Rawson Mountains drains through the Domenigoni Valley toward the southwest.

Only the northwest corner of the study area drains directly into the San Jacinto River, which veers northward around the Lakeview Mountains until, in the vicinity of the City of Lakeview, it veers southwest to Lake Elsinore. The major portion of the study area is drained by Salt Creek, a tributary of the San Jacinto which drains in a western direction to the south of the Lakeview Mountains, meeting the San Jacinto at Railroad Canyon Reservoir.

A description of the San Jacinto River, written circa 1901, gives a clear picture of the character of the stream and the drainage basin.

The San Jacinto is a typical Southern California torrent, deserving of name of river only at certain rare intervals when seasons of heavy rainfall produce a runoff of such volume as to enable it to fill two large lakes which lie along its source and which, when filled, finally overflow and seek an outlet to

the sea by joining the Santa Ana River at Rincon, below South Riverside. The first of these lakes is located in the great San Jacinto Valley, about fifteen miles northwest from the mouth of the canyon, and is a broad, shallow lagoon of large capacity. Before reaching this pond, the river must traverse a broad, porous bed of sand and gravel which is capacious enough to swallow up a very considerable stream (including the portion of the riverbed in our planning area). In other seasons the river does not reach all the way to the lagoon before being absorbed in these thirsty gravel beds. When the seasons are wetter, the river may reach the lagoon and fill it partially or wholly. Any water overflowing the lagoon must then pass southwest across the San Jacinto Valley on a very flat slope, filling more gravel beds on the way, and thence through a rocky canyon to Elsinore Lake, a total distance of twenty-five miles in an air line from the lagoon, or about forty miles by the channels. If the season is extremely wet, the runoff may suffice to fill the lake and overflow to the Santa Ana, a further distance of twenty-five miles, and thus make a continuous connection from the mountains to the sea; but this occurs at such rare intervals as to be phenomenal whenever it does happen.¹

The fluctuating character of the San Jacinto River rendered it of little value as a source of supply for irrigation prior to the construction of the Hemet Dam in 1890-1895. Water from Hemet Lake was piped down to a subdivision then called South San Jacinto, encompassing much of what is now known as Hemet. There the water was used to irrigate tracts of five to twenty acres that were chiefly planted in deciduous fruits. Persons buying into the subdivision had rights to approximately one acre foot of water per acre per year. Water from Lake Hemet is still furnished to the customers of the Lake Hemet Water Company.

As early as 1875, artesian wells were flowing in and around the City of San Jacinto, and during the next four decades, their number rose steadily. By 1915 there were about 1,500 flowing wells northwest of San Jacinto, though by then some wells along the southeastern edge of the pressure area had already ceased to flow. From 1915 on, more and more artesian

¹U.S., Department of Agriculture, Office of Experiment Stations, Problems of Water Storage in Torrential Streams of Southern California as Typified by Sweetwater and San Jacinto Rivers, by O. James, Bulletin No. 100.

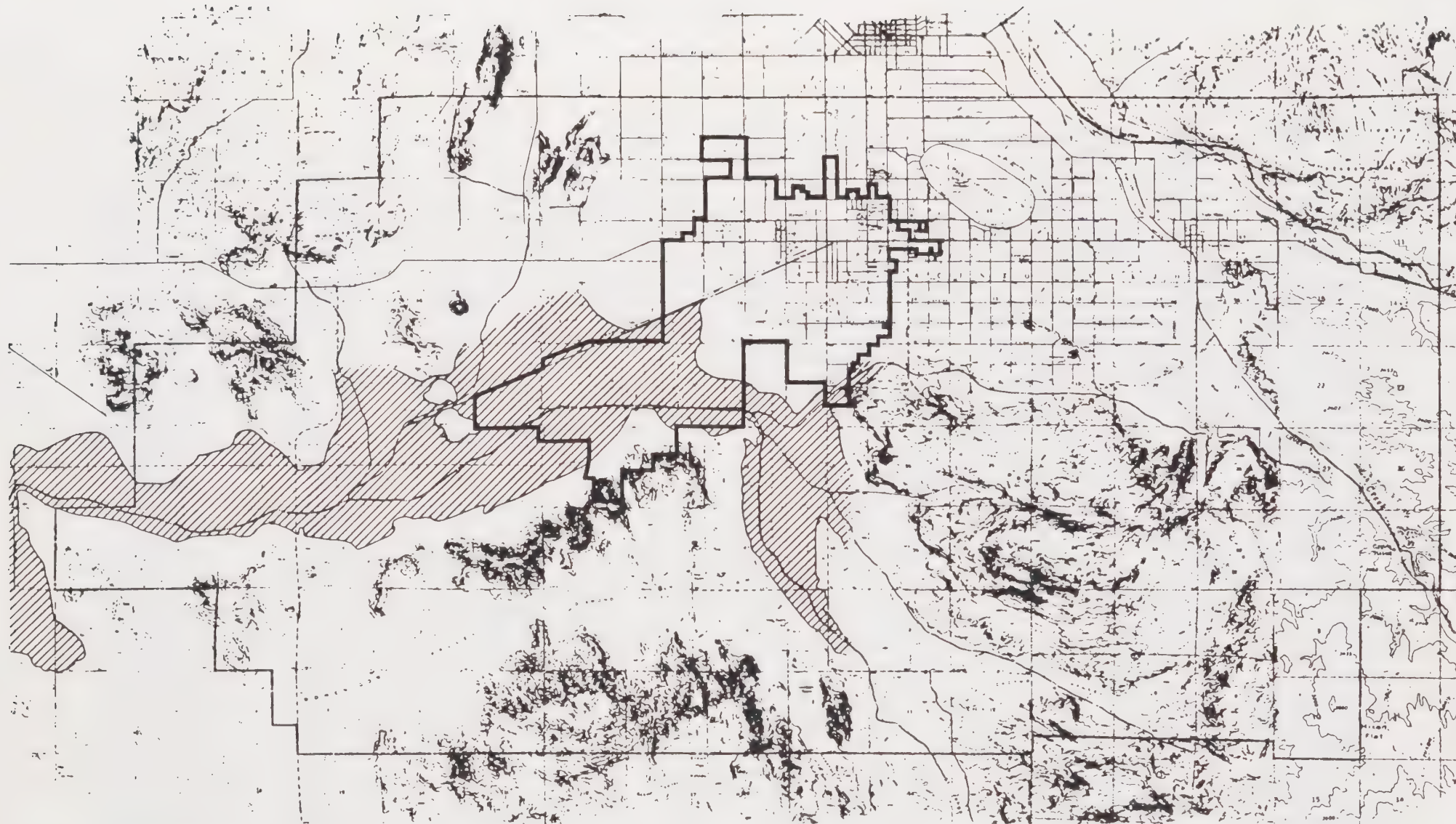
wells stopped functioning. The last flowing artesian wells were about two miles northeast of Lakeview, where the San Jacinto River turns southwestward. There they continued to flow until around 1950, and a few springs are still active today in that vicinity, but they are warm springs and are believed to be the result of geologic faults.

Irrigation was first practiced in the upper portion of the San Jacinto Basin in the 1860s, but intensive development around Hemet started in the 1880s. In 1895, Lake Hemet Reservoir on the South Fork of the San Jacinto River was completed and it became the main source of gravity water for irrigation until Colorado River Water became available in the area in 1952. Lake Hemet and the Colorado River Aqueduct have always supplied smaller portions of water than has been obtained from wells. As pumps became more efficient and as the artesian wells ceased to flow, the inhabitants of the San Jacinto River Valley were forced to rely more and more on pumped groundwater as their principal source of supply. But as development mushroomed, it became increasingly necessary to supplement and replenish the groundwater with imported water. However, although water has been percolated through spreading grounds along the San Jacinto River, the rate of replenishment by imported Colorado River water has failed to match and offset the yearly extraction of groundwater. This has caused water levels to drop sharply and slope patterns to shift, with the result that brackish water invades areas of good water. Mineral quality has also been adversely affected in some sections of the valley. For this reason, a number of wells have had to be abandoned and the use of others curtailed.

It is not only the quantity of water, therefore, which has been drastically affected, but it is the quality of it as well. Other factors which have adversely affected the quality of the water have been the high concentrations of salts in the imported Colorado River water and the fact that the San Jacinto River basin is a closed basin. This means that all waste from agricultural, domestic, and industrial uses, as well as the high concentrations of salts in imported water, stay within the basin.

The basic sources of water supply in the valley area have been precipitation, runoff, groundwater, and imported water. Groundwater is the major source of supply, although more and more water is being imported (see Fig. 8).

Precipitation. As indicated in the section on Climate, precipitation in the area as a whole is moderate and occurs most extensively during the winter months. The average annual precipitation in the San Jacinto River basin varies from a maximum of about forty inches near San Jacinto Peak to a minimum of ten inches in the Perris Valley. Of the precipitation which eventually reaches the Hemet valley









- | | | | |
|--|------------------------|---|-----------------------------|
|  | STANDARD PROJECT FLOOD |  | CITY LIMITS |
|  | MAJOR WATER WAY |  | WASH |
|  | PLANNING AREA BOUNDARY |  | GROUND WATER RECHARGE AREAS |

Figure 8

RECHARGE/FLOOD AREAS & WATER WAYS

(Source Owen Menard)

0 5,000 10,000
SCALE



floor, approximately eighty percent falls directly on the valley floor and twenty percent arrives in the form of runoff from the mountains.

Runoff. The major sources of surface inflow to the Hemet valley are the San Jacinto River and its tributaries-- Indian Creek, Poppet Creek, Potrero Creek, and Bautista Creek. Salt Creek drains the area southwest of the City of Hemet and flows into the Railroad Canyon Reservoir. Stream runoff from these and other sources averages about 48,000 acre feet per year. Flow of the San Jacinto River is partly regulated by Lake Hemet Dam, and diversions for irrigation and domestic uses are made between the dam and the gauging station near San Jacinto. The drainage area of 141 square miles above the station contributes no flow during several months of most years. Surface water in the San Jacinto River is diverted below the gauging station to the San Jacinto spreading grounds next to the river about five miles southeast of San Jacinto. These diversions represent a part of the water conservation program.

Groundwater. The alluvial fill of the San Jacinto Valley is completely rimmed by rocks of the nonwater-bearing group, except for openings into Domenigoni Valley. Along the San Jacinto Fault Zone and east of Hemet, crystalline rocks and impervious clays rim the valley. Crystalline rocks alone occur on all other sides. Thus, the central valley portion of the study area forms a relatively sealed groundwater basin.

Over eighty percent of the surface runoff in the upper portions of the San Jacinto River basin reach the eastern part of the valley floor in the San Jacinto River bed. Heavy percolation to groundwater has taken place here since before pumping in the valley began. From here the principal groundwater movement has been toward the northwest into the pressure aquifers where artesian wells once existed. A small percentage of the water has probably seeped through the Bautista Creek Fault into the Hemet area. Farther northwest there has also probably been a small amount of seepage through the Casa Loma Fault.

The heavy development of pumping for irrigation in recent years and the consequent lowering of water tables has reduced to insignificance the natural surface discharge of groundwater within the San Jacinto area. Instead, discharge now occurs almost entirely through wells. Recharge in the upper San Jacinto Valley is still the main source of replenishment. In general, groundwater levels are higher there than in other parts of the basin where heavy pumping year after year has resulted in a marked drop in water levels. However, groundwater gradients indicate that some movement of water still occurs from upper San Jacinto Valley into

basins to the southwest. Most of the water pumped from the San Jacinto area has accumulated during many centuries in the past, and present withdrawals are thus now depleting this longstanding supply.

Sub-basins. Because of the faults acting as barriers to movement of groundwater, the level and quality of groundwater within the valley alluvial areas can vary dramatically within the space of a few hundred feet. Despite this, there are certain general consistencies within areas. Therefore, the valley has been divided into sub-basins by the Department of Water Resources. The Hemet planning area includes portions of the San Jacinto Sub-basin, the Hemet Sub-basin, and the Winchester Sub-basin. Descriptions of the groundwater geology of these sub-basins follow:

The San Jacinto Sub-basin is generally located between the Bautista Creek Fault and the mountains to the northeast and southeast. The area includes the only major pressure area in the San Jacinto Valley. This area of deep pressure aquifers fed hundreds of artesian wells earlier in the century. The principal intake area for this pressure area is at its southeast end. The principal source of recharge is percolation from the San Jacinto River, but Bautista, Poppet and Indian Creeks also contribute. The base of the fresh water in the San Jacinto Sub-basin extends at least to a depth of 5,000 feet.

The Hemet Sub-basin includes all valley lands lying south of the Casa Loma and Bautista Creek Faults and east of the Lakeview Mountains and the constriction in the valley two miles east of Winchester. Irrigation wells of heavy drift are found throughout the Hemet Sub-basin. Most of the water pumped is believed to come from deep aquifers. Several wells west of Hemet yield water with temperatures ranging up to thirty-nine degrees centigrade. Some of the warm water here may issue into the alluvium from a bedrock fault or faults whose location is uncertain. The base of the groundwater extends to about 700 feet in the Hemet Sub-basin.

The direction of the groundwater gradient in most of the Hemet area is to the southwest toward the Winchester area. The principal natural accretion to groundwater storage in the Hemet Sub-basin is apparently due to water that seeps through the Casa Loma and Bautista Creek Faults. The groundwater supply is also supplemented by deep percolation of imported surface water.

Areas of very poor percolation occur in the vicinity of Warren Road and Highway 74 west of Hemet and in the lower end of Diamond Valley about 1.5 miles south of Stetson Avenue. Water stands on the ground surface in both places for some time after rains. Elsewhere in the Hemet area,

penetration of surface water is generally greater.

The far western portion of the planning area is in the Winchester Sub-basin. It is separated from the Hemet Sub-basin by the constriction in the valley two miles east of Winchester; however, there are no surface or groundwater divides between the two sub-basins. The log of the deepest well available, drilled about 1.5 miles east of Winchester, bottomed at 285 feet in "cemented hard clay".

Wells. In much of the San Jacinto River Valley, the yield from wells is excellent which accounts for much of the area's present development. Records indicate that yields reach as high as 3,000 gallons per minute. The more productive wells are those along the river in the central San Jacinto Sub-basin, while the less productive ones are usually around the margins of groundwater-bearing areas.

Water Levels. The effects of groundwater extractions are manifested by the decline in water levels throughout the valley. The results of a study measuring depth to water from ground surface in wells illustrates the trend. In 1922 the largest category was zero to twenty feet in depth; in 1940 the largest category was forty to sixty feet in depth; and in 1964 the largest category was 120 to 140 feet in depth. It is estimated that the amount of groundwater in storage was reduced by about one million acre feet during this period from January, 1922, to November, 1964.

Water Storage. Although water levels have been dropping in the San Jacinto Valley, replenishment of groundwater does occur to some extent. Floodwaters from precipitation in hills surrounding the basin are an important factor in recharging the groundwater. This principally affects areas nearest the hills. Central portions of the valley are affected principally by direct runoff.

Much of the groundwater recharge is restricted to a strip along the San Jacinto River and Bautista Creek south of the town of San Jacinto. The Hemet/San Jacinto area is crossed by northwest trending groundwater barriers. Therefore, the area close to the San Jacinto River and Bautista Creek receives most of the direct recharge and, when full, spills into the next area to the west. As a result, the western parts of the San Jacinto area receive little recharge unless the eastern groundwater basins are full. The most significant groundwater recharge potential occurs in the porous areas directly below where the San Jacinto River and Bautista Creek enter the basin. Other sources of recharge are direct precipitation and relatively small local hillside drainage areas.

Imported Water. Because groundwater was becoming

seriously depleted, Colorado River water was imported into the valley. It was first used in 1942 on March Air Force Base, and later, the Eastern Municipal Water District made it available to the San Jacinto Basin in 1952. This water is now used to some extent in all of the sub-basins in the valley. Perris Reservoir located in the San Jacinto Valley is the terminus of the State water project. Therefore, in a short time, water from the Feather River will also be available to the Hemet area. This will be discussed further in the section on Water Quality.

Water Quality and Land Use

In general, uses in the Hemet area can be classified as urban, agricultural, or vacant. According to a spokesman for the Eastern Municipal Water District, urban and agricultural uses require about the same amount of water per acre per year. This, of course, depends on the type of agriculture and upon the intensity of the urban use. Furthermore, agricultural and urban uses have significantly different quality requirements, with urban uses, of course, having higher requirements.

In general, water quality in the area varies significantly, with conditions being highly localized. The quality of water in the study area ranges in total dissolved solids (TDS) from less than fifty milligrams per liter (mg/l) in some surface water draining off the San Jacinto Mountains to over 11,000 mg/l in some groundwater areas.

Among the natural factors affecting water quality are: the mineralogic and geologic environment; the amount of water available and its rate of circulation; the quantity of evaporation and transpiration; the biological processes; and temperature.

Locally, where waters flow from faults and springs, quality may be affected; mineralization of the water in the surrounding area may be variable and have high temperatures and concentrations of fluoride and boron. The eastern side of the Valley is shaped by a major fault system and wells that are close to the faults often produce a more mineralized water.

Generally, the amount of groundwater available and its rate of movement and mixing, affect the degree of mineralization. It picks up minerals as it slowly moves through and comes in intimate contact with rock minerals. The more groundwater available and the faster it moves through the soil, the lower will be the mineral concentration for a given condition. This effect can be witnessed in several areas of the San Jacinto River Valley, especially adjacent to the San Jacinto

Mountains.

Evaporation and transpiration will increase mineral concentrations of water and, in some cases, the increase could be significant. Water evaporates essentially as pure water, while the minerals held in solution are left behind to mix with the remaining water. In relatively warm, dry climates, such as the San Jacinto River Valley, when groundwater is at or near ground surface, mineral increases will occur concurrently with large water losses. When the diluting water supply is insufficient to keep mineral concentrations at a low level, brackish waters may develop in areas with high groundwater levels. This has happened in the Winchester, Perris, and Menifee Basins.

Temperature of water is also important; for some uses it may even be critical. It affects water's palatability, its industrial usefulness in various processes, such as cooling, and its suitability as a habitat for aquatic life. It has been reported that water warmer than 66° may cause complaints when used for drinking; most of the groundwater in the study area is over 66° F.

The fact that the San Jacinto Valley has poor internal drainage and is a closed basin presents a "rather serious problem" according to the Department of Water Resources. If Colorado River water is used for irrigation and land is maintained at a high productive level, both leaching and removal of the leachate from the basin must be accomplished. One acre foot of Colorado River water brings in a ton of salts, whereas one acre foot of Feather River water would bring in a little less than a third that amount.

Development of any type is dependent upon water of adequate quality being available in sufficient quantity and at an economic cost. Criteria for quality, quantity and cost vary with the type of use. For instance, residential water has to be of high quality, but the cost can be higher, too.

In addition to the constraints that the water supply puts on land use, there are others imposed by standards for waste water which is returned to the ground. These standards may rule out some types of industrial or agricultural uses in some areas because of the cost or difficulty of bringing the waste water up to necessary standards.

The development of water resources by man further affects its quality through use and reuse. The activities of man almost always increase mineral concentration. If there is a great deal of unregulated industry connected with the sewage system, the mineral increase may be much higher. Water used for irrigating crops experiences a mineral increase; a large loss occurs due to evapo-transpiration, which leaves residual deposits of salts in the soil. Suc-

cessive applications of irrigation waters may leach these salts deeper into the soil or may carry them off as surface drainage. In either case, these leachates eventually reach surface streams or groundwater. One constituent carried in these leach waters that is frequently found in groundwater is nitrate derived from fertilizers. High nitrate concentrations often occur in groundwater underlying areas of intense irrigation, such as several areas in the San Jacinto River Valley.

The Role of Water in the Future

Most of the water being used in the Hemet area is groundwater from wells. The remainder is from precipitation, from storage in Lake Hemet on the San Jacinto River, and from water imported from the Colorado River. In the near future water will also be imported from the Feather River through the California Water project. As discussed earlier, this water source will be lower in mineral content, but higher in pollutants than the Colorado River water. It is the intention of the Eastern Municipal Water District to blend the two imported waters together and to filter them. This will produce water which is of better quality than the Colorado River water and less expensive than the Feather River water. Despite this measure, it is doubtful that most agricultural operations can afford to use the new blended water. Where possible, they will rely upon wells, and if this is not possible, they will attempt to get unblended Colorado River water. Thus, while there appears to be adequate imported water for urbanization at a continuing and increasing rate, agricultural requirements will probably continue to rely on groundwater.

As mentioned in previous sections, the supply and quality of groundwater in the valley has been generally decreasing over the years. This is due to continuing withdrawals that are in most years greater than groundwater recharge. The problem will continue to be aggravated by urban developments and flood control works that do not provide opportunities for the percolation of runoff. Facilities for this, such as dry wells, could be required in the design of all major urban developments. A forthcoming proposal by the Santa Ana Watershed Planning Agency will be to inject significant amounts of State water into the San Jacinto Groundwater Basin. Thus, the high quality State water would be mixed with lower quality groundwater. The blending would delay the downgrading of groundwater in the San Jacinto Basin, overall provide an increased supply of water, and allow for a greater amount of local underground water storage.

Until such time as State water is injected into the ground, virtually all percolation of water to the groundwater table

in the valley will occur along San Jacinto River and Bautista Creek. Urban development or further construction of concrete-lined channels in the area would have a strong negative impact on the entire area in that it would greatly limit possibilities for groundwater recharge. Concrete channelization has already occurred along portions of Bautista Creek.

Native Vegetation

There are several native plant communities within the Hemet planning area. The groupings and some of the more common plants are:

- a) Riparian (in river bottoms and some canyons where there is water)--cottonwoods, willows and sycamores.
- b) Valley Grassland (range-type plants)--brome grasses and filaree.
- c) Southern Oak Woodland (in the valley and ascending to about 5,000 feet at Vandeventer Flat in the San Jacinto Mountains)--Encina (coastline oak), sugar bush, and squaw bush.
- d) Coastal Sage Scrub (mostly below 2,500 to 3,000 feet in elevation)--California sagebrush, white sage, lemonadeberry, and encelia.
- e) Chaparral (highly susceptible to fire, mostly over 3,000 feet in elevation)--Chamise (greasewood), Christmasberry, buckthorn, scrub oak, Yucca Whipplei, California lilac, and manzanita.

There are no rare plants in the planning area that need special protection; however, the riparian plants are not plentiful and they are valuable as wildlife habitats, as scenery and as shade.

Native Vegetation and Land Use

Native vegetation affects land use in several ways. Some of these are described below:

Fire Hazard. In hilly areas native plant material can be an extreme fire hazard during dry seasons. The creosote bush, which is also known as greasewood, is particularly flammable. Although the fire hazard associated with native vegetation seemingly has not influenced types of land uses being located in certain areas, it has influenced the cost and development standards of these uses. Areas which are a distance away from the urbanized core have special require-

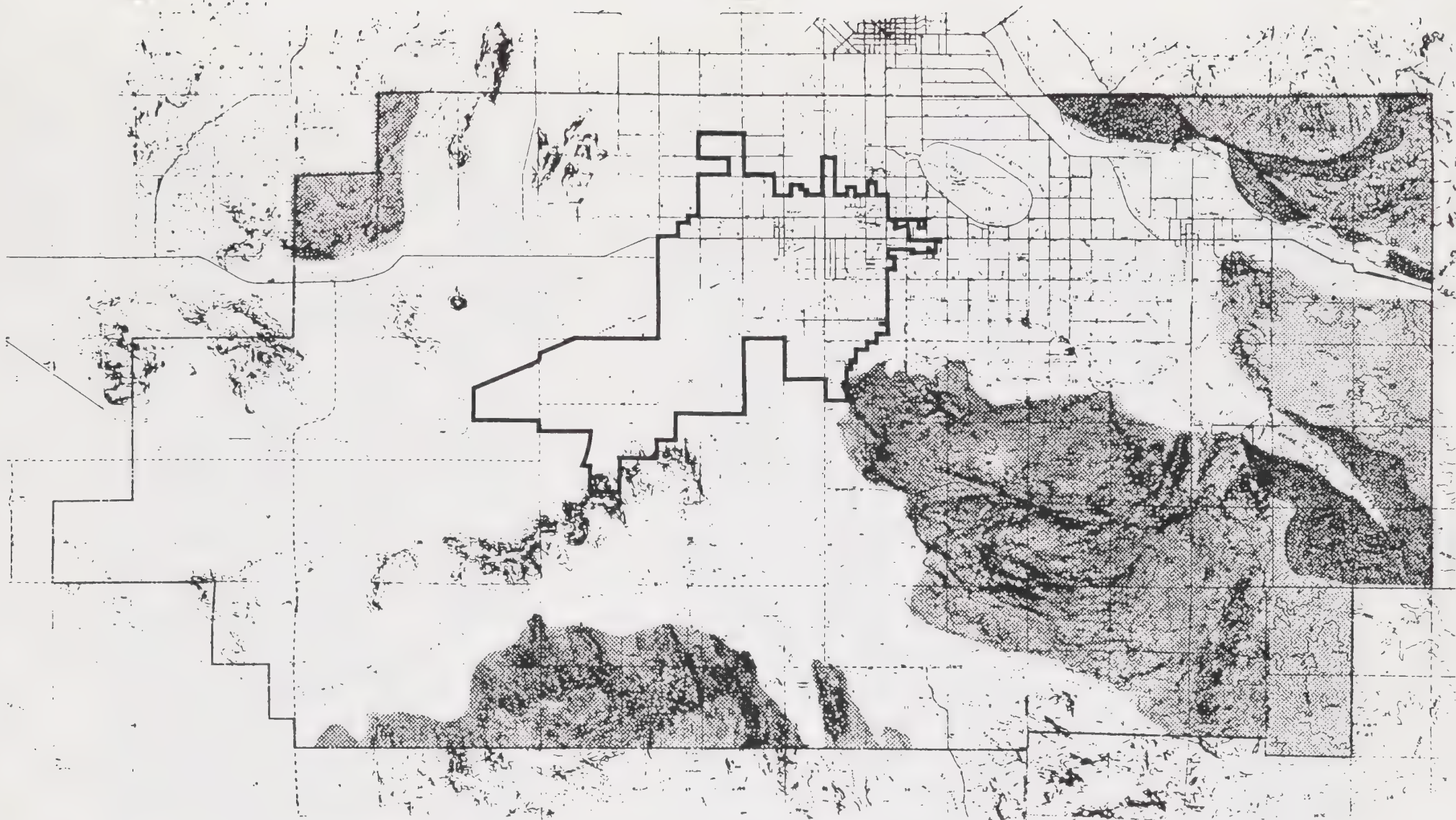
ments placed on them by the County Fire Marshall. These requirements deal with access, water storage and fire fighting equipment. Even in close-in areas, such as the hill slopes just south of Hemet, homeowners find that they have higher insurance rates and that insurance companies will not insure certain types of construction or buildings which are surrounded by native vegetation such as the creosote bush.

Development of extreme fire areas poses a potential threat to life and limb of those who will live there. Dangers from fire can be mitigated to a degree by providing adequate access for fire trucks and elimination of all but the shortest dead-end roads so that residents will have secondary exits. These considerations necessitate extra roads which can visually scar scenic hillside areas, as well as increase erosion and runoff. Further, development of these areas may necessitate "fuel modification" in the vicinity of the development. This usually means removing the native combustible vegetation and replacing it with other forms of less combustible vegetation. This disturbs natural habitats and could result in erosion of the native vegetation is not adequately replaced.

Development of extreme fire areas may not only cause those areas to have higher insurance rates. The presence of development in such areas causes a proportionately greater burden on the community's fire fighting force than other types of development. Community-wide fire-fighting requirements can increase from extensive development of these areas to the extent that more equipment and/or higher insurance rates for everyone will result.

Thus, for the above reasons areas of extreme fire hazard, as determined by the State Division of Forestry, are regarded as natural and open space resource areas. They are indicated on Figure 9 .

Landslide Potential. Another way in which the potential land uses are affected by native vegetation is by the landslide hazard. Plant cover influences land sliding in two important ways: 1) by intercepting rainfall and regulating its infiltration into the soil and substrata, and 2) by binding the soil and bedrock separately and together through its rootmat and thus adding to the gross-strength of the earth materials. The terrain covered by the grass and coastal sage plant communities has a very high ratio of infiltration capacity to low root strength. The grasses densely cover the surface of the ground and intercept nearly all of the precipitation with little falling on bare ground. Grass covered areas have an infiltration capacity of about twice that of bare or sparsely covered ground. Their root systems are weak and shallow and provide little support to rock materials lying deeper than a few inches. Grass and





 EXTREME FIRE HAZARD
 RIPARIAN &/OR DESERT CULTURE

Figure 9
**FIRE HAZARD/CRITICAL
 HABITAT AREAS**

(Source Owen Menard)

0 5,000 10,000
 SCALE



coastal sage terrains generally absorb all but a few percent of the precipitation, except during record storms when the ground storage capacity is exceeded. The underlying soils and rocks become saturated and lose strength, and without the influence of a strong rootmat, landslides are rather uniformly distributed over broad areas.

The chaparral plant community has strong, deep and well developed root systems. These plants have a balanced influence on slope stability, for the infiltration capacity is relatively high. This would normally lead to a decrease in rock strength, but it is offset by the great strength of the rootmat. It has been found that scrub oaks, Eastwood manzanita and Christmasberry are most effective in stabilizing slopes, and chamise and chaparral white thorn are somewhat less effective. From the standpoint of land use, it would appear that it is best to avoid building on grassy or sage-covered slopes and to avoid removing natural cover of the chaparral type unless it is replaced by other deep-rooted plants.

Slopes which have lost their vegetative covering through fire or removal by man have much less stability than those normally void of vegetation. These burned-over slopes are particularly vulnerable to mud slides during heavy rainfall. Generally, the effect of urban or agricultural development upon native vegetation is to cause it to be removed. As this occurs, it not only increases the chances of landslides, but it also destroys wildlife habitats. The latter is discussed more thoroughly in the section on Wildlife which follows.

Wildlife

Types of wildlife in an area to a great extent reflect the plant communities. Both are determined chiefly by latitude and altitude and are further refined by proximity of oceans and air currents in connection with topographic features.

In 1908 a field study was made which resulted in the publication of "An Account of the Birds and Mammals of the San Jacinto Area of Southern California". Most of this study was conducted in the San Jacinto Mountains; however, one of the field locations was Valle Vista, a community a few miles east of Hemet within the Hemet planning area. From this field location, the surveyors sighted about thirty species of birds and ten species of small animals. It was noted with interest that some of the birds and animals on the western side of the San Jacinto Mountains were the same as those found at the same elevations on the eastern side. However, because of the extreme differences in humidity on the two sides of the mountain, there were many species which were found only in one place or the other.

The researchers designated the lands lying within the Hemet planning area as being parts of the Lower Sonoran and Upper Sonoran Life Zones. These life zones correspond closely to the plant communities; the Lower Sonoran includes the Riparian, Coastal Sage, and Southern Oak Woodland plant communities and extends to approximately 2,000 to 2,500 feet in elevation. The Upper Sonoran includes the chaparral community.

Most of the planning area lies within the Lower Sonoran Life Zone. The major types of wildlife there are jack rabbits, brush rabbits, cottontails, song birds, quail, doves, and kangaroo rats. It should be noted that the Stephens kangaroo rat (*Dipodomus stephensi*) which apparently lives only in the San Jacinto Valley is on the State's list of rare and endangered species. The Department of Biology at California State Polytechnic University at Pomona has been studying this rat under a contract with the State Department of Fish and Game. Thus far in the study, Bautista Canyon is the only place in the study area that has been determined to be a significant habitat of the Stephens kangaroo rat. A specimen was also identified in Diamond Valley, but the habitat there is regarded as very poor.

Bautista Canyon, as a matter of fact, is an extremely valuable area in terms of wildlife. It harbors species of animals, insects and plants that are usually found only on the desert side of the San Jacinto Mountains and has been termed a "desert island". In addition, it is the habitat for species ordinarily found locally; therefore, its habitats are very diverse. For example, in addition to the Stephens kangaroo rat, three other types of kangaroo rats have been found there. The canyon is an important place for the study of ecology.

In addition to the small animals and birds which live in the Hemet area, there are a number of "raptors" (owls, eagles, and hawks) which are dependent on these small creatures for food. Larger animals include deer, coyotes, and mountain lions.

Several amphibians and reptiles in the area are "protected", (i.e., bag limits) in California as of March 1, 1973. These are the Coast Horned Lizard, Banded Geck, Granite Night Lizard, Orange-throated Whiptail, and Rosy Boa. The California Legless Lizard and Desert Horned Lizard may also be in the area. In 1921, the latter was found there, although it ordinarily resides only on the eastern side of the mountains. More common reptiles, such as the rattlesnake, also inhabit the area.

Wildlife and Land Use

As the valley lands have been taken over by agriculture and urban uses, the wildlife has been pushed back into the hilly areas and canyons. These areas and a few undisturbed riparian areas are the only remaining wildlife habitats within the planning area. If they are urbanized or otherwise destroyed, wildlife will largely vanish from the area. It should be noted that most of these animals and birds can stand a great deal of human disturbance as long as their habitats are preserved.

Constructing roads in canyons will usually destroy the areas as wildlife habitats, even though the canyon walls are virtually untouched. This is caused by the fact that most of the wildlife is dependent on vegetation growing in the bottoms of draws and ravines. These are cut off by the construction and often cleaned out.

It appears that the most critical local areas in terms of protecting both important natural vegetation and wildlife are riparian areas and the related desert culture habitats as it exists in Bautista Canyon. These are shown on Figure 9 . The most significant single area is Bautista Canyon where a new improved highway has been indicated in the General Land Use Plan. Existing riparian habitats, plus any other areas that ongoing studies may reveal as being habitats of the Stephens kangaroo rat, should be considered for protection and preservation.

V

THE

CULTURAL

ENVIRONMENT

THE CULTURAL ENVIRONMENT

Archaeology

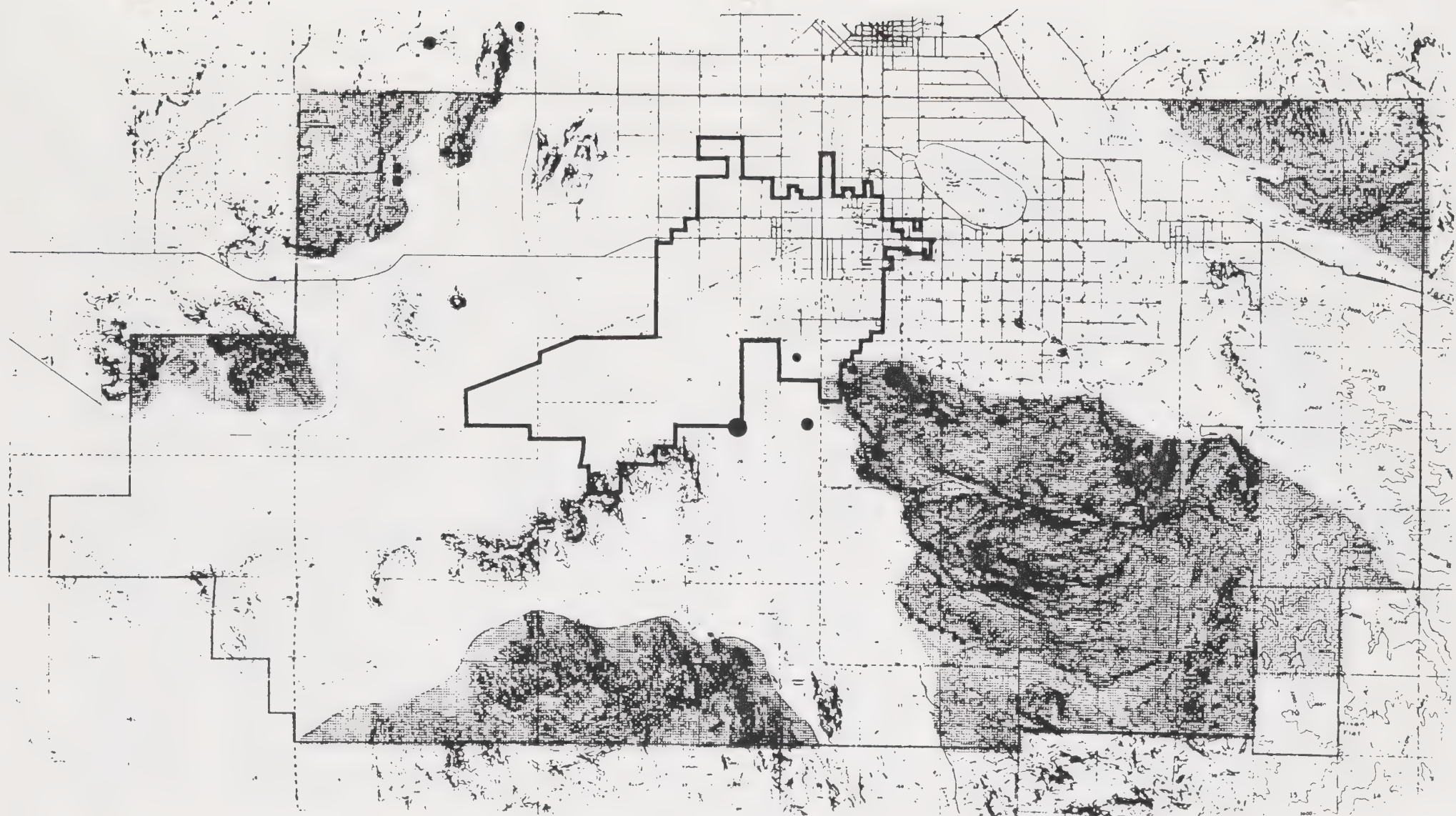
The Hemet area is rich in archaeological remains of Indians who were the descendants of the modern day Sobobas whose reservation lies partially within the Hemet planning area. The principal settlement at the time the Spanish arrived was Pochea Village centered near the Ramona Bowl, with settlements associated with the village spread over an area of around three miles long by one mile wide.¹ It has been estimated by some to have been the largest Indian village in California. Smallpox, introduced by the Spaniards, caused the village to be abandoned.

Figure 10 indicates locations of known sites and general areas of known Indian activity where archaeological remains are likely to be found. Known sites include petroglyphs (rock paintings and carvings), cave shelters, and food processing areas (milling slabs). Perhaps the best known site is the Maze Stone which lies less than a mile out of our study area and is a petroglyph protected within a five-acre County Park.

Dr. Gerald Smith of the San Bernardino County Museum stressed the importance of conducting a complete inventory of the rich archaeological resources found in the Hemet vicinity and of ranking those resources in order of priority. Highest priority items would be preserved from development. Other areas, when faced with development, would be excavated and archaeological remains recorded. Most people around Hemet seem to know of places in the hills where archaeological remains can be found. Yet there has been no comprehensive inventory as suggested above. Such a step would not only prove a necessary beginning to preserving this knowledge, but could form the basis for further study by local people, particularly school classes interested in the history of their area. Perhaps most important is the need to establish the location of Indian settlements in the vicinity of the Ramona Bowl. This was the center of Indian activity, and new residential development in that vicinity may already have destroyed some of the remains.

The Ramona Bowl itself is a cultural resource. In the yearly Ramona Pageant, the life of the Mission Indians is retold, usually to full houses in the outdoor amphitheater. A summer

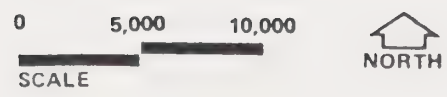
¹Estimate by Clarence Swift, Hemet City Historian, in Landmarks of Riverside County.



- KNOWN SITES
- ▨ AREAS OF INDIAN ACTIVITY

Figure 10
**ARCHAEOLOGICAL
RESOURCES**

(Source Owen Menard)



concert series is also popular, as is the Ramona Bowl museum.

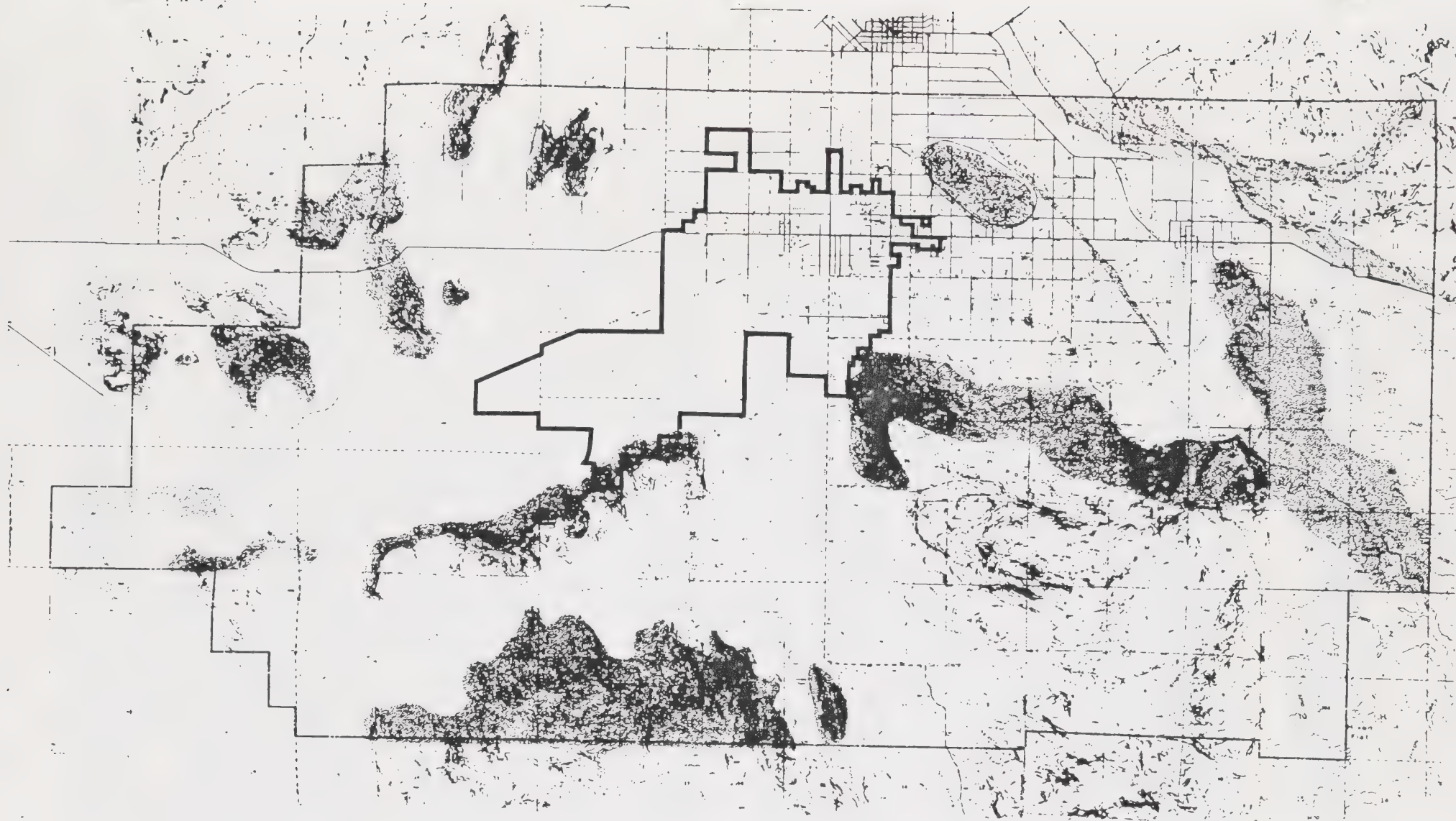
Research could not uncover any known significant historic resources in the area, with the exception of the old Hemet railroad station. Archaeological remains, it should be noted, are pre-historic.

One may, however, regard the traditional urban form of the settlement in the valley as having historic value in that despite recent trends to the contrary, Hemet still relates to its valley in a way not like the modern highway sprawl settlement. In Hemet one finds the classic situation of the pleasant town and nuclear downtown set in the center of a rich agricultural valley, surrounded by fields and orchards, which are in turn surrounded by beautiful hills. The relationship of settled areas to open space within the valley still has a character that is worth preserving.

Scenic Resources

Major scenic resources have been mapped. Several widely accepted criteria have been utilized for defining areas of important scenic resources. These criteria and related scenic resources are presented below. Figure 11 identifies these resources.

- 1) Areas of significant natural vegetation. In the Hemet area this occurs principally in the river bottom and arroyo bottoms.
- 2) Prominent scenic landmarks. These are highly visible points of visual reference, usually major land forms such as hills. They are the scenic features that inhabitants of an area most commonly associate as representing their idea of what the local scenery is like. Most significant in Hemet is Park Hill.
- 3) Scenic gateways and vistas. These are the general areas where one enters an area, usually coming over a hill, and catches the first glimpse of the entire area in a capsule perspective. When such gateways are urbanized, they lose their meaningfulness. This occurs when valley settlements "spillover" into other valleys. In Hemet, a scenic gateway exists about one mile after Highway 74 enters the study area from the west.
- 4) Scenic hillsides and mountains. These provide the scenic backdrop for the town. Even though the hillsides and mountains may be miles away and seldom seen up close, they are valued by people, for the hills and mountains frame their lives with a



□ SIGNIFICANT SCENIC AREAS

Figure 11
SCENIC AREAS
(Source Owen Menard)

0 5,000 10,000
SCALE



backdrop of undeveloped beauty. In Hemet, these areas consist of all hillsides facing the valley.

Public Lands

Regional Parks. Regional parks are defined as meeting either of the following criteria:

- 1) Encompass a large enough area so as to be considered urban forming.
- 2) Is a region-serving facility.

At present there is only one regional park that meets the above criteria: James Simpson Park. The City-owned, 480-acre facility is located in the hills to the southeast of Hemet. A previously prepared park master plan calls for an information and caretaker's building, a wildlife lake, over ten miles of horse trails, several picnic areas with rest rooms (one already installed), a tree-planting program, a partial system of hydrants (already installed), and a wildlife sanctuary. The City is currently seeking funds for further development of the park. The City has been aided in its efforts to improve the park by the Kiwanis.

The 1968 Hemet-San Jacinto General Land Use Plan indicates several regional park facilities. Open space easements are indicated along both banks of the San Jacinto River. The plan calls for a San Jacinto open space strip with a minimum width of 2,000 feet. In addition to trails, this would include several regional parks for nature, picnicking, boating swimming, equestrian and similar activities. Sizes of these facilities are not specified. That plan also recommends a special use park oriented to nature appreciation and picnics proposed on U.S. Forest Service land east of Valle Vista and north of the river. An open space easement is indicated along the east bank of the lower reaches of Bautista Creek. A regional park (facilities and size not specified) is indicated for Bautista Canyon. A twenty-acre park is proposed for the Santa Rosa Hills adjacent to Gibbel Flat. The site would be used as either a natural area or for a community park should the nearby area develop. An unspecified facility is also indicated at the crest of the Domenigoni Mountains. A ninety-acre city-owned tract on Warren Road that was formerly a landfill is indicated as being converted to a special use park after 1980. Uses would include picnic areas, ballfields, and equestrian facilities.

Maze Stone Park, a historical monument, borders the planning area at the northwest corner. This park consists of about five acres in Reinhardt Canyon, and the County intends to

expand it to approximately fifty acres. The expanded facility may overlap slightly into the planning area and, in any case, all access to the facility and virtually all buildable land near the facility are within the planning area.

Although not within the planning area, though bordering it, the State Park and National Forest that encompass the San Jacinto Mountain area, provide important regional recreational resources. Highly popular with Hemet area residents, the mountain areas are used for scenic drives, camping, fishing, hiking, and similar activities.

A significant regional park is being planned by the County to be about six miles south of Winchester in the Auld Valley. Although also not within our planning area, it will provide an important regional recreational facility for area residents. The planned park will be developed on 6,000 acres owned by the Metropolitan Water District, including the 1,200-acre Lake Skinner.

Bureau of Land Management Lands. As indicated on Figure 12, the Bureau of Land Management (BLM) owns several parcels in the planning area ranging in size from eighty acres to approximately 1,400 acres. Total area holdings are approximately 4,000 acres. The BLM has not yet prepared plans for these parcels although that agency is now in the process of preparing management plans for various areas under its jurisdiction. BLM holdings within the planning area have low priority because they are relatively small and scattered pieces and there hasn't been pressure for development into other uses.

Significant Rights-of-Way. The City's Scenic Highways Element considers the various roads and highways in the area in terms of their scenic value. There are many roads in the Hemet Valley, both major and minor, that provide for beautiful scenic drives. If some of these roads could be declared scenic, rights-of-way utilized for bicycle paths and other types of trails acquired and the scenery around these thoroughfares protected, it would be a great boon to the area's recreational opportunities.

The existing County master plan shows improvement of the Bautista Canyon Road to Major Highway status (100 to 110 feet right-of-way width, four lanes). This would provide a more direct connection with the Anza area. Like the proposed freeway, it would be providing through traffic access to the southeast from Hemet. It would increase through traffic in Hemet and create pressures for development of Bautista Canyon. The proposed road would cause irreparable damage to the canyon as a wildlife habitat. It would necessitate significant grading and bridging and would separate much of the creek bottom from surrounding habitat areas and disturb the necessary ecologic relationship of

the two areas and greatly decrease the canyon's wildlife habitat value. As explained earlier, Bautista Canyon is a habitat area of major importance.

Hemet is served by the Atchison, Topeka and Santa Fe Railroad which enters the area west of Winchester, goes past Winchester and turns northeast to the middle of Hemet, where it turns north to San Jacinto. There is currently only once-a-day service on the railroad.

The San Diego Canal runs north-south through the planning area, following the general direction of Warren Road to the base of the Domenigoni Mountains, veering west around those mountains, and leaving the planning area through the Domenigoni Valley. It is indicated as a regional bicycle trail on the County's (June, 1973) Bicycle Trail Plan. It appears that if it is feasible to construct an adequate trail on the canal's right-of-way, it could provide a major traffic-free, regional bicycle (or hiking or riding) trail.

There are no major utility line rights-of-way through the area that would be significant as an open space consideration. Other than the above-mentioned canal, the only possibilities for traffic-free trails would be along the San Jacinto riverbed and along Bautista Creek below Florida Avenue. Other regional bicycle or riding trails could utilize the rights-of-way of lightly traveled scenic roads.

Soboba Indian Reservation. The Soboba Indian Reservation occupies the northeast corner of the planning area and covers most of the hill area northeast of the San Jacinto riverbed. The major geographic feature within the portion of the reservation lying within the Hemet planning area is Indian Creek Canyon. This canyon and the river into which it empties are among the more scenic areas within the planning area. It is now used mostly for grazing.

According to the Bureau of Indian Affairs, no land use plans have been prepared for the Soboba Indian Reservation. A member of the tribe, however, did mention that if water were available in the Indian Creek Canyon, that the tribe would like to develop it. Indian Creek Canyon is reported to be an excellent area for hiking, riding and hunting. The Indians have closed the area to the public, however, because of the damage that was done and the litter that was left behind from past usage. The Indian Reservation is subject only to County laws and regulations which refer directly to State laws.

Agricultural Lands

The once agriculturally-oriented Hemet area has been undergoing rapid urbanization. Only the extensive citrus groves in the Bautista Creek area have been economically strong

enough to withstand the pressure of development. This area is reportedly the only location in the United States where a summer grapefruit can be grown.

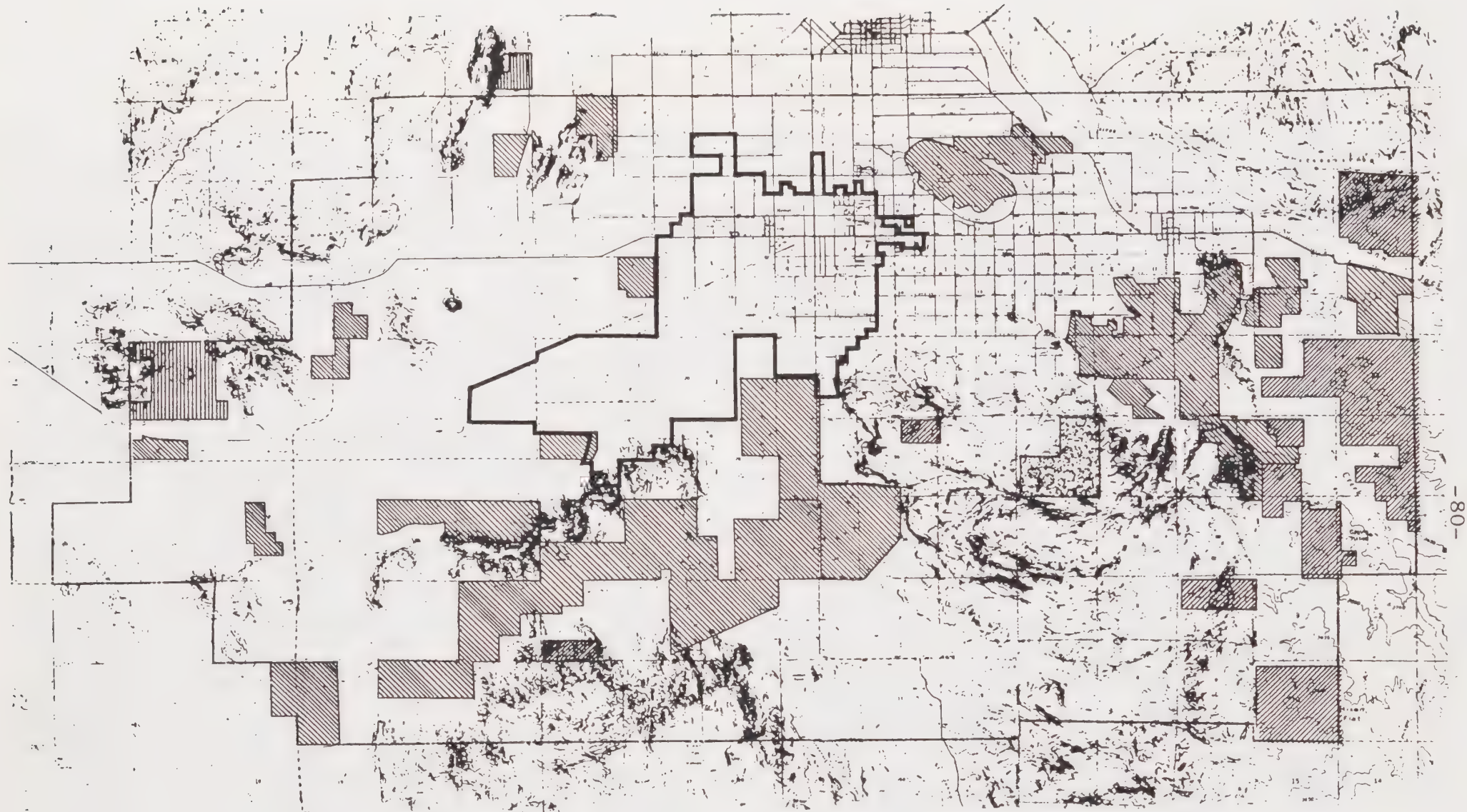
Between the City and the citrus area is an area that is now largely urbanized but was once a major producing area for apricots and walnuts. These agricultural uses succumbed to pressures for urban development during the development surge of the 1960s. Also at that time agricultural prices were decreasing. With urban developments now scattered throughout this area, its total urbanization, given present methods of taxation and land use control, is a foregone conclusion. New subdivisions and their necessary utilities, roads, schools, etc. have caused the adjacent agricultural lands to increase in value. Also, holdings in the area east of town generally don't fall within the one hundred acre minimum size limit for agricultural preserves.

Prime agricultural lands west of Hemet have been utilized primarily for irrigated pasture (including horse ranches for breeding thoroughbreds), alfalfa, and potatoes. This area also has been subject to pressures brought about by urban development occurring largely as scattered mobile home developments. Also, animal-related agricultural uses have been found at times to be incompatible with nearby residents.

Land in this area is also generally in holdings below one hundred acres and is not considered for agricultural preserves. With the exception of some of the horse ranches, the agricultural area west of Hemet appears highly susceptible to urban development.

In the southwest and Diamond Valley areas, agricultural lands tend to be in large ownerships. The conversion of these areas from agriculture to urban uses is typically preceded by a master plan for development. In County areas, often a specific plan is prepared by the property interests and submitted to the County. In these cases, one ownership or parcel converting to urban may contain 1,500 acres or more and may lead to a population of 15,000 to 20,000 persons at build-out. This trend can have a major impact on service levels and quality in both city and unincorporated areas. In addition, the process seems to promote a ubiquitous pattern of large scale development. The Lusk development called Salt Creek on the east side of I-15 represents this pattern. The only criteria for this type of development appears to be a large scale ownership and a definite economic advantage of urban development over agriculture. More is said about this in the Land Use Element.

Figure 12 shows the location of existing agricultural preserves. The principal preserve is the main citrus growing



- Park Lands
- Federal Lands - BLM
- Agricultural Preserves
- Refuse Disposal Sites

Figure 12

PUBLIC AND PRIVATE OPEN LANDS

(Source Owen Menard
and County of Riverside)

0 5,000 10,000
SCALE



area. Overall, the agricultural preserves technique as it is now utilized in the Hemet area is not providing the necessary protection needed if agricultural lands around Hemet are to maintain their economic integrity. The County could re-evaluate its agricultural preserve policies and make broader use of the technique in conjunction with a more definitive definition of agricultural areas in the County land use plan and zoning. Possibly new and more economic crops could be found for the area. Recent increases in farm prices and shortages of some basic staples show us how important prime agricultural lands are to society; once urbanized their agricultural resource value is lost forever. The higher prices are strengthening agricultural operations in the Valley and, however, helping to keep them in open space use.

Existing Park Facilities

The principal public agencies involved in meeting park needs in Hemet are the City, the Valley-wide Recreation and Park District, and the School District. In addition, Hemet has numerous private recreational areas within a number of its residential tract developments and nearly all of the mobile home areas. Existing facilities are summarized on Figure 13 .

City. There are three City parks within Hemet: Weston Park, Gibbel Park, and a mini park on Florida and Buena Vista. Weston Park is five acres and is located on Florida Avenue near the eastern edge of the downtown commercial area. There are many fine, mature trees, picnic facilities, a children's playground, public restroom facilities, covered shuffleboard courts, and a building for senior citizens which includes a small stage and a meeting room. This park is a place of natural beauty and inspiration. It serves mainly as a place for passive activity, be it people seeking solitude or an organized picnic lunch. Weston Park appears, in fact, to serve as a downtown plaza, a place to socialize, meet, and be seen. It is well-frequented by retirees who utilize it for organized social affairs, as well as on an informal basis. It appears that the picnic and playground facilities are often completely utilized. Overall, the facility is highly successful in meeting the park needs of many people.

Gibbel Park is ten acres and is located on Florida Avenue near the western edge of the City. Florida Avenue in this area serves as a through arterial highway with high-speed traffic, including numerous trucks. In order to shield the park from this influence (both noise and visual), landscaped berms have been formed along Florida Avenue. However, they do not seem to be entirely effective. Particularly noticeable is the acceleration of trucks as they leave the City. Also, they can be seen over the tops of the berms.

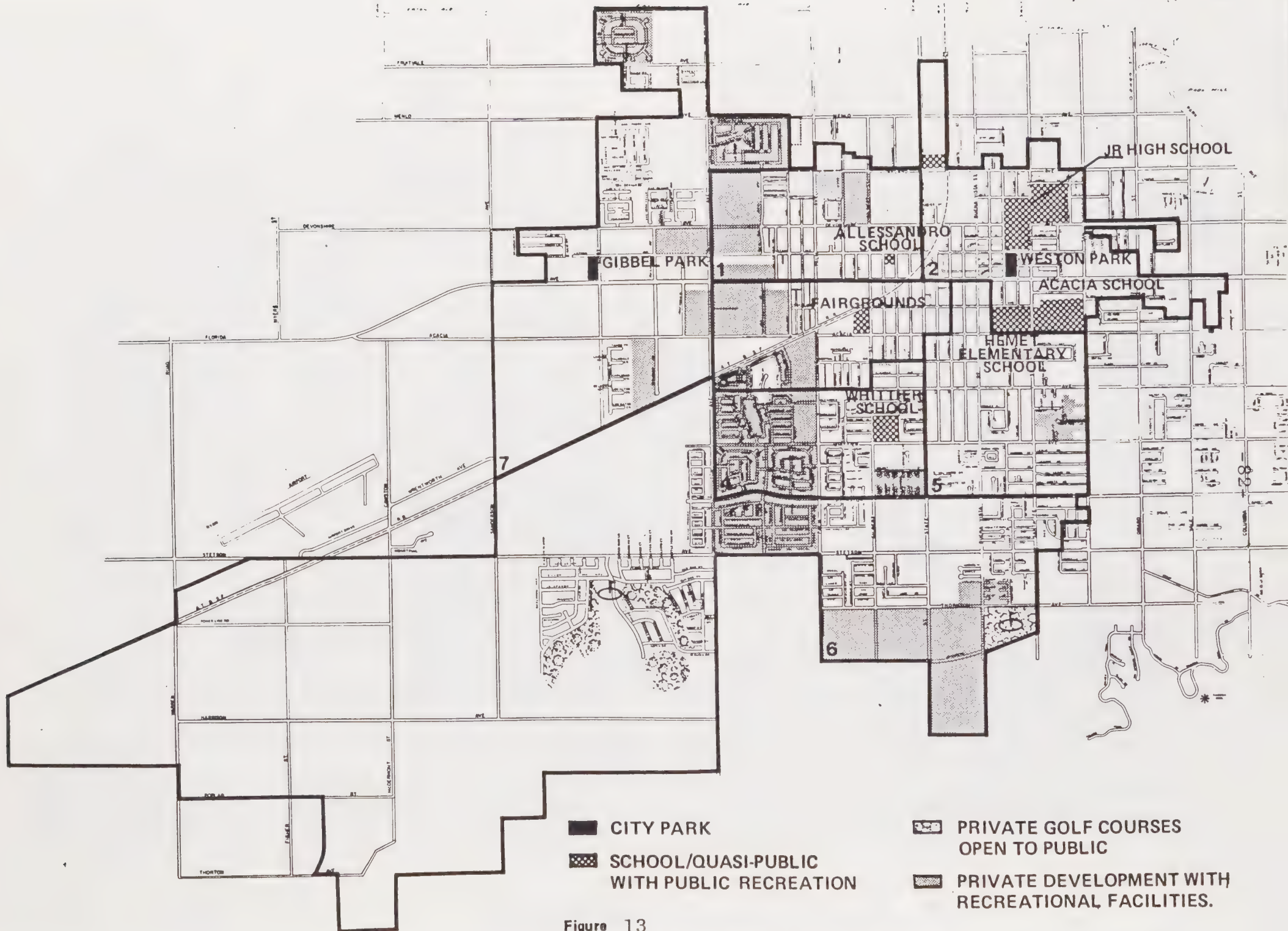


Figure 13

EXISTING PARKS AND RECREATION AREAS

Additionally, the park is fenced with only a few access points making usage more difficult. Within the park there are playground areas, a few picnic tables, a sand-covered baseball diamond, and a roller skating area. In the center of the park are some small restroom facilities. Overall, Gibbel Park is at best only moderately utilized. This is probably due to its location at the edge of the City in relation to Hemet's population. The nearest residential area begins a block away to the west and is primarily a retirement area. Gibbel Park's facilities, however, are primarily geared to youth.

The mini-park on Florida Boulevard has sitting areas and shade trees. The park is intended as a rest area for downtown shoppers.

Hemet Unified School District. The District operates four schools within the Hemet City limits. In accordance with State requirements, school facilities are available to the public for recreational and related activities. The School District regards communitywide utilization of its facilities as an important service that is a part of its overall responsibility to the community. That is, the district goes out of its way to assure and promote the fullest utilization of its facilities by the community.

All of the school playgrounds are open at all times. The two elementary schools within Hemet contain the usual play equipment for that age group (swings, slides, etc.). All four schools have ballfields and basketball courts. In addition to this, the Acacia School has a lighted ballfield, and the Junior High School has a lighted football field and (non-lighted) tennis courts. With the exception of the Whittier School, the schools are clustered in the north-east corner of the City. As will be seen in a later section, this brings the schools in closer proximity to areas where concentrations of school children live.

In addition to encouraging public use of its outdoor facilities, the District arranges for use of its indoor facilities, including gymnasiums, swimming pools, classrooms (for adult education), and auditoriums. Thus, the School District has a definite and conscious policy of promoting the use of its facilities as community centers for all segments of the community. In general, the school facilities appear to be utilized fairly heavily. In particular, outdoor lighted facilities are very heavily utilized. The lighted field adjacent to the Acacia School is in poor condition, probably due to over-utilization.

Valley-wide Recreation and Park District. This agency formed in May, 1973, serves an area encompassing both the Hemet and San Jacinto Unified School Districts. The District is empowered to develop and operate recreational facilities

and programs.

The District concentrates most of its activities in organizing recreational programs in school and City facilities. The District owns and maintains a 40-acre park on Esplanade and State Street. Also, the City, County and School District have a continued interest in providing new recreational facilities and areas.

Other Public, Quasi-Public Facilities. The YMCA is located at the corner of Menlo and State and has basketball courts, a new softball field which it hopes to have lighted, and a recreation hall. A swimming pool is planned for the near future. In general, the "Y" facilities are heavily utilized.

The State Fairgrounds, scene of the yearly Farmer's Fair, is located near the center of town. At the once-a-year week-long fair, there is a rodeo, carnival, livestock exhibits, etc. The fair generally receives a high attendance. Buildings are available for public use at other times of the year for a moderate rental. The fairgrounds also have a lighted ballfield which is heavily utilized by the community during the baseball season. The Fair Board of Directors are currently searching for a new site for their facility. It is important to Hemet that the site be located within the Valley. Otherwise, an important facility would be lost.

Hemet's citizens naturally utilize facilities outside of the City limits. As mentioned previously, the San Jacinto State Park and National Forest are important areas for recreation drives and outdoor activities. Also covered in the Hemet area, the City-owned Simpson Park is on its way to becoming an important local place for family and group outings. The nearby Ramona Bowl has a five-week summer concert program that is well attended by local residents. The School District has facilities east of Hemet that are utilized by the people of Hemet.

Private Recreational Facilities

Many of Hemet's 24,000 people live in developments which provide community operated and maintained private recreational areas. The great majority of these developments are mobile home parks or subdivisions. In addition, there are tract developments that include private facilities. Most of the developments that include private recreational facilities are retirement oriented.

The reasons for the provision of these facilities are two-fold - namely zoning and marketing. To an extent, the dev-

elopments have hovered near the minimum requirements, and this explains the similarities in types of facilities provided. The facilities are also required from a marketing standpoint. The retirement development market is the scene of continued competition, and prospective buyers are giving increasing concern to recreation facilities that come with the development.

With the exception of three small and older mobile home parks (that were developed before zoning requirements for recreational areas), all retirement developments in Hemet have private recreational facilities. The basic provision is for a recreation hall and swimming pool. The building typically includes a general meeting room with a kitchen off to one side, a card room, and a semi-open shuffleboard court. The pool is typically about twenty feet long. Few of the developments provide anything beyond this. Two offer golf, and several more have small putting greens. A few developments offer sitting areas and nature areas. The degree of utilization of these facilities appears to vary among developments.

V I

P A R K N E E D S

A N E I G H B O R H O O D A N A L Y S I S

PARK NEEDS: A NEIGHBORHOOD ANALYSIS

Introduction

The analysis of future park needs are based on the growth strategies established in the land use element. The most significant factor in Hemet's future population is immigration which depends largely upon external economic trends and cannot be accurately determined by way of a simple projection.

Presently, Hemet is dependent upon the retirement industry to sustain its economy. As such, the economy is tertiary-based with the service sector responsible for Hemet's economic base for the most part. The analysis relies on the assumption that the retirement age bracket will continue to grow as it has in the past. This again is dependent upon assumptions of Hemet's economic future.

Another possible limitation of this analysis is that, for analytical purposes, the plan assumes that the most important determinant of people's park needs is their age. This has been done while recognizing that there exists in Hemet a tendency to think of a new proposed facility as having to be for either retirement people or young people. One of the functions of public places, such as parks, should be to serve the entire community. Although in certain areas where certain age groups predominate, neighborhood parks should be designed for those age groups.

General Categories of Park Facilities

The park categories presented below are highly generalized. They are utilized as a means to analyzing park needs and should not be interpreted as mandates for future park design programs. The facilities as described below can be combined with each other or include additional features not mentioned here. Park design must be flexible if it is to meet the needs of people.

Sitting Area. This is a very small area of ground that includes a bench, perhaps a picnic table, paving to reach the bench, sufficient ground cover to prevent weeds, and a few shrubs and trees. It is most popular with the retired group where it provides a rest area on excursions (biking or walking), a small social area, and a place for "people watching". It is also popular with young mothers taking a stroll with their young ones.

Tot-lot. The tot-lot is aimed at the pre-school aged children who will generally be accompanied by parents. The play equipment or furniture is designed to accommodate small people and should include things for swinging, climbing, jumping, and exploring to help children understand the means for social interaction, group and solitary play, and bodily coordination. When located near a street, precautions must be taken to prevent a child from suddenly leaving, usually accomplished by fencing. This mini-park also includes planting and sitting areas.

Playground. The playground is aimed at ages from childhood through grade school or so, and integrates larger scaled play furniture with the tot-lot furniture and sitting areas. Many of the same activities will go on with the addition of some older games such as basketball. Both the tot-lot and the playground are less than $\frac{1}{2}$ acre in size, some areas being as small as 5,000 square feet.

Neighborhood Park. Including sitting areas, tot-lot and playground, the neighborhood park is to accommodate all ages within an area. Other elements include ballfields of dirt or ground cover, shuffle board, a shelter for protection against sudden downpours or in some instances a small community building, rest rooms, bicycle trails, paths, places to sit and eat, lawn and dirt areas for activities such as "frisbee", and other ways and means to try to satisfy all ages wherever possible. Actual facilities included in the park should reflect the population of the surrounding neighborhood. The size of the neighborhood park is from five to ten acres.

Community Park. The community park is aimed at the whole community. More specifically it seeks to meet such needs as the afternoon family outing, the group picnic, the league ball game, the class outing. In addition to including neighborhood park facilities, the community park can include expanded picnic and active sports areas, nature study areas and a multi-purpose community center and band shell. It may also include a small lake, museums, and a nature study interpretive center. Size is from twenty to forty acres, the larger range being advisable in an area expecting large population increases in the future, or where the size is to include significant amounts of natural areas.

Downtown Plaza. Designed to reflect the architectural character of the downtown and provide "visual relief", it is a resting place and pedestrian pathways for those who use the downtown most: shoppers and their children, store and office employees, and "people watchers". It may include works of art and beauty such as sculpture and fountains.

Facility and Locational Requirements for User-Groups

The above parks are defined in terms of what types of facilities may be provided. As mentioned, the type of parks and the types of facilities required relate to specific ages and preferences of diverse groups. These different groups vary in their ability to get to places. Thus, while a community facility may include a playground for grade school children, this age group does not always have the mobility to make regular use of such a facility and may require the provision of playgrounds in smaller park developments closer to home. Thus, by way of making basic assumptions as to the needs of park user-groups, we can propose locational criteria for various types of parks.

Pre-school Children and Their Mothers. The ideal would be to provide a tot-lot within walking distance of all areas where there are pre-school children. In reality this is not always feasible due to limited availability of vacant lots or the lack of population concentration in these categories. The facilities should be located where the need is most obvious. Maximum walking distance is defined as approximately $\frac{1}{4}$ mile, assuming the terrain is level.

Grade School Children (7 to 11 years old). These children require areas for active and unsupervised play. They need playgrounds within safe walking distance of their homes. The concern for safety requires not locating these facilities where children will have to cross dangerous intersections. Walking distance may be approximately $\frac{1}{4}$ mile.

Adolescents and Young Adults (12 to 18 years old). This group requires places for active sports. Mobility within this age group may vary greatly from walking to bicycling to automobiles. Some facilities should be located within walking distance of all areas where there are substantial populations. Reasonable walking distance is $\frac{1}{2}$ mile. Neighborhood parks will generally solve these needs, as well as those of other age groups.

In addition to active sports, the twelve to eighteen year olds would probably be the most significant users of open space related to educational facilities, such as nature areas, informational centers, and museums. Such facilities will usually be used through the schools or as part of a family outing and are not dependent upon the mobility requirements of the twelve to eighteen age group. As mentioned above, facilities for these activities are most appropriate in a Community Park which will provide activities of community-wide importance.

Child-rearing and Working Adults (19 to 59 years old). This age category generally has the option of an automobile

but significantly less leisure time than either younger or older groups. When people in this group plan to use a recreational facility, it is more likely to be a special outing or organized group activity. The need is for the family outing with the full range of activities including picnicking and active sports areas. Despite the usual availability of the auto, it is desirable to provide at least some provision for family outing activities within walking distance of all "family" residences. The integration of picnic and sitting areas with other activities could be accomplished through the neighborhood parks. Overall, the basic need is for a significant community park within, say, fifteen minutes driving time.

Retired Adults (60 plus). The primary need relates to passive recreation: sitting, checkers, shuffleboard, meeting rooms, bathing, etc. This should be provided not only in all neighborhood parks, but also in a limited way within $\frac{1}{4}$ mile walking distance in all areas of Hemet.

Neighborhood Analysis

The most significant aspect of the Hemet population is the large number of retired persons. According to the 1977 Special Census, over 60 percent of Hemet's population was sixty years or older and approximately 70 percent of Hemet's total population is retired. Furthermore, analysis of residential development with private recreational facilities indicates that they are largely retirement-oriented. These figures indicate unique characteristics of Hemet that are of particular relevance to park needs. To the extent that park facilities are provided privately, they don't have to be provided by public agencies except at the community and regional level.

Retired people have large amounts of leisure time. By definition, the retired life style is one in which primary emphasis is placed on utilization of leisure time. Ideally, this would be in a beautiful, self-fulfilling, and interesting manner. Hemet has a significantly greater than average non-working population and a greater need for recreational facilities than communities with a younger population.

The retired people that have come to Hemet have been primarily attracted to the pleasant climate and beautiful natural surroundings. There is a strong interest in outdoor activities. One of the key aspects to this interest is the popularity of bicycling and golfing. Recommendations for park facilities in developing areas aimed at meeting the needs of retirees should include a future bike path network.

Determining Neighborhood Needs

In determining neighborhood park needs, the population of the neighborhood and existing facilities were examined. It is assumed that private recreational facilities will continue to be provided in new retirement developments. The main factor for determining need is that whenever there are significant population numbers in certain age brackets, then certain types of park facilities should be provided within certain distances of where people live.

The question of how many people in an age group constitutes a significant number insofar as warranting a park facility, is difficult to answer. Various standards have been developed relating population numbers to park requirements. Reliance on these standards generally results in a de-emphasis on people-related considerations. The generally accepted national planning standard of four acres of developed parkland per 1,000 population is a guideline in considering the overall City. This standard of four acres per 1,000 population also applies to communitywide facilities.

A thirty to forty-acre community park to serve Hemet and its fringe areas is recommended. This will be detailed in the fringe area policies. The community park will supplement the proposed new neighborhood-oriented facilities by providing such things as lighted playfields, a lake, nature study areas, museum, and other facilities that would serve the entire area. On this basis, neighborhood-oriented parks should total approximately two and a half to three acres per 1,000 population. In a neighborhood of 2,500 we might require a five-acre neighborhood park and a few mini-parks. The exact park mix needed in each area will depend upon its individual characteristics.

As a further note, the formula of four acres per 1,000 people is sometimes regarded as a distant ideal that is not usually met. It should be recognized that Hemet, due to its retirement emphasis, may have a greater than average requirement for public parks. Since private facilities provide for much of the retirement need, four acres per 1,000 people is considered realistic for Hemet.

The 1970 Census divided Hemet into sixteen Census Enumeration Districts. In order to have meaningful neighborhood statistics, the Census Enumeration Districts (E.D.) were utilized to define neighborhoods. That is various E.D. were aggregated in order to form seven neighborhoods. To the fullest extent possible, and within the limitations of the Census District boundary lines, the neighborhoods utilized for study purposes are based on common life styles and types of development. The boundaries of the seven neighborhoods or planning

areas are indicated in Figure 14 . These same neighborhoods are utilized in the Housing Element. Park facilities are shown in Figure 13 . The following examines park needs for each neighborhood with estimates of present and future neighborhood needs.

Neighborhood 1. Neighborhood 1 had an estimated 1977 population of 2,930, or fifteen percent of the City's total. In 1970, fifteen percent of its population was eighteen and under, and fifty-nine percent was sixty and over. It is expected that this area will maintain this same approximate relative age breakdown through 1990 although a slight increase in elderly population is anticipated. Total 1990 population is expected to be 4,400.

The area is currently characterized by a mixture of development. It includes portions of the downtown area, new mobile home developments, strip commercial along Florida Avenue, new apartment developments and some of the City's older residential areas. Approximately twenty percent of this area is undeveloped.

The only public park facility within Neighborhood 1 is the small playground at the Alessandro School in the southeast corner of the neighborhood. This is about a mile from the most northwesterly corner. The nearest school playground includes a ballfield and is between one-half and two miles of various neighborhood areas (either Whittier or Hemet Elementary Schools). Various parts of Neighborhood 1 are within one-half to one and a half miles of either Gibbel or Weston Park. The YMCA and the Fairground's ballfield are within one block of the neighborhood line. There exist five private developments within the area that provide a recreation hall and a swimming pool.

There is a clear need for new park facilities in Neighborhood 1, considering that 1) the unincorporated fringe area directly to the north is in the process of developing and may be annexed in the near future; 2) Florida Avenue, a major thoroughfare, will be a barrier to children using facilities south of that street; and 3) the neighborhood areas to the east and west will be primarily served by Gibbel and Weston Parks respectively. While the youth population of Neighborhood 1 is not extremely large, it requires additional facilities within that area. The park need for youth would be for a relatively small park serving a broad range of the youth age brackets. The sixty-plus group also requires a complete range of neighborhood recreational areas. As this population is and will be rather significant in numbers, the need is for a rather complete provision of such parks according to our previously developed locational criteria.

Existing needs for Neighborhood 1 could be served by a sitting

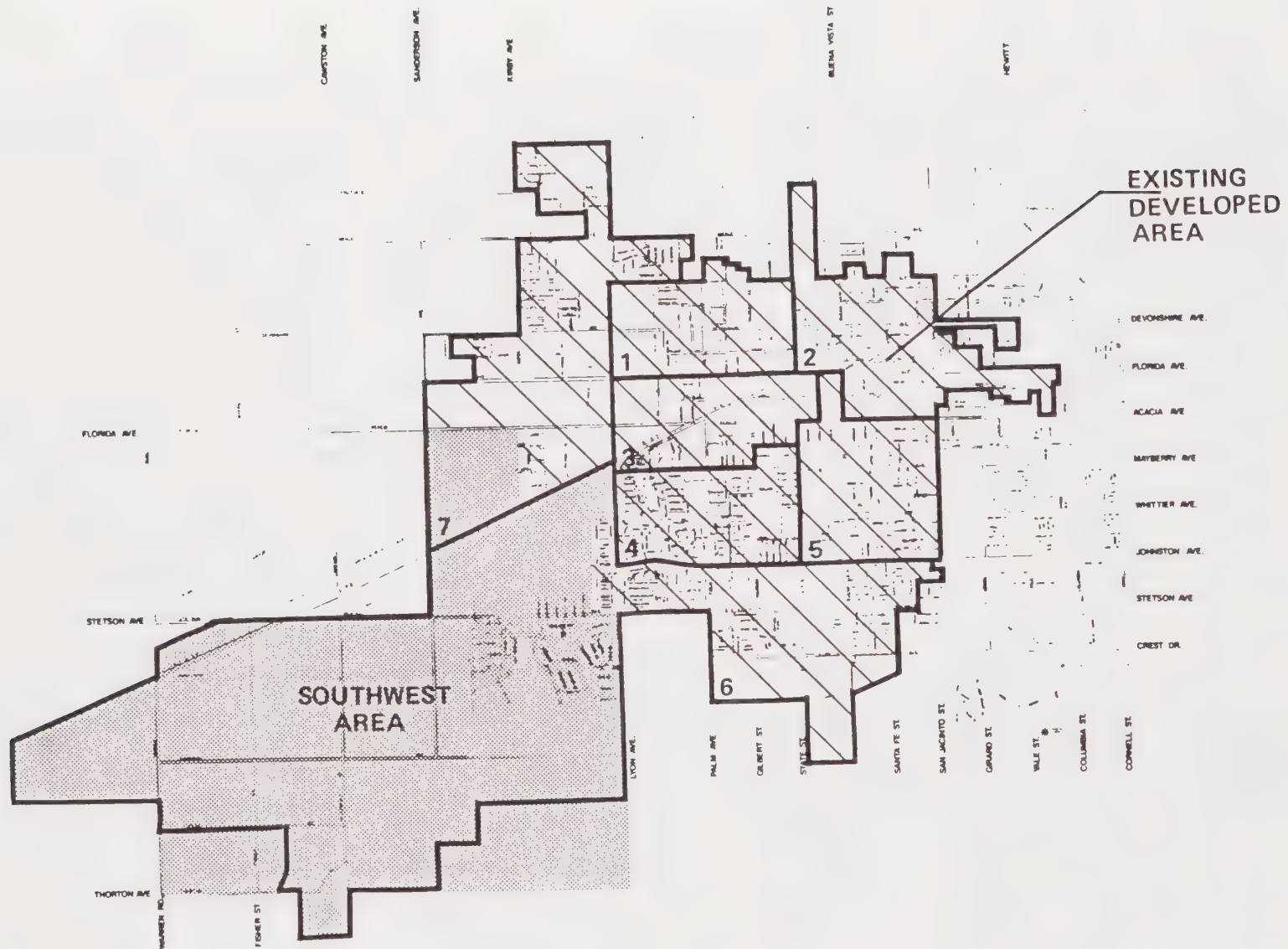


Figure 14
PLANNING AREAS 1 - 7

area and a tot-lot in the southern area. Long-range needs would be for the neighborhood park in the northern part of the neighborhood area, as well as an additional sitting area. Total local park facility needs for Neighborhood 1, at two and a half to three acres per 1,000 population, should be eleven acres by 1990 and possibly larger if they are to also serve the fringe area to the north, as well as northern areas of Neighborhood 7.

Neighborhood 2. Neighborhood 2 had an estimated 1970 population of 2,050, or eleven percent of the City's total. In 1970, twenty percent of its population was eighteen and under, and forty-six percent was sixty and over. It is expected that this area will maintain the same approximate age breakdown through 1990. Although recycling to a higher density residential is likely to occur, the 1990 population is expected to remain unchanged due to additional commercial developments replacing some of the existing residential population. Neighborhood 2 represents the old, established downtown located in the southwest portion of the neighborhood. Commercial uses located downtown extend eastward along Florida Avenue to the eastern limits of the City where shopping centers are located. Along State Street, the western limit of this area, are a number of commercial uses which soon blend into more industrial-like uses to the north of downtown in the vicinity of the railroad tracks. Residential density types are mixed.

Neighborhood 2 includes the following recreation areas: Weston Park, YMCA, Hemet Junior High School, Hemet Elementary School, Acacia School and a mini-park on Florida at Buena Vista. There are currently no developments offering private recreational facilities.

Neighborhood 2 is generally well-endowed with public recreational facilities. Although Weston Park is heavily utilized, the development of similar facilities in other areas will take some of the pressure off of it. As the northwest and fringe areas continue to develop, two sitting areas and a tot-lot could be considered to provide near-to-home small-scale facilities. The planned expansion of the recreation building in Weston Park will help serve the needs of retired people in this area who don't have private recreational halls in any of their developments. Future acreage requirements are small, perhaps one acre for a few mini-parks.

Neighborhood 3. Neighborhood 3 had an estimated 1977 population of 1,820, or ten percent of the City's total. In 1970, ten percent were eighteen and under and sixty-four percent were sixty and over. It is expected that this area will maintain this same approximate relative age breakdown through 1990. The total 1990 population is expected to be 1,990.

The eastern portion of Neighborhood 3 is characterized by the older developments around the downtown. Immediately surrounding this portion of downtown are a number of blocks consisting of older housing of mixed types. The State Fairgrounds are located in the central part of this area, which may be relocated. In the southwest portion there are a number of new single-family homes and apartments including a part of a development that contains a nine-hole golf course. New mobile home developments are in the western area. In the midst of the new development area is a mobile home manufacturing plant.

The only public park facility is the Fairground ballfield which may not be available for recreation if the facility is relocated. There exist mobile home developments with private facilities and part of a single-family development which includes the nine-hole golf course. The nearest school playgrounds are within one-fourth to one and a half miles of various portions of the neighborhood. Gibbel and Weston Parks are within one-half to one and a half miles of various portions of the neighborhood.

In Neighborhood 3 there is a clear need for new park facilities, mainly to serve the existing population. Because of the smallness of the present and expected youth population, only a small tot-lot is seen as a need, possibly near the Fairgrounds. Principal need is for several sitting areas and a neighborhood park-type facility (it could be shared with other areas to the south). The area facilities discussed here represent existing needs. Total 1990 local park needs for Neighborhood 3, at two and a half to three acres per 1,000, should be about five to six acres.

Neighborhood 4. Neighborhood 4 had an estimated 1977 population of 3,190, or fifteen percent of the City's total. In 1970, seven percent of its population was eighteen and under and seventy-six percent was sixty and over. It is currently the most retirement-oriented neighborhood. It is estimated that this same relative age breakdown will be maintained through 1990. Total 1990 population is expected to be 3,190.

Neighborhood 4 is entirely residential with the exception of Whittier Elementary School. This neighborhood contains part of a mobile home subdivision on the southwest corner. The northwest part is occupied by the continuation of the single-family development with the nine-hole golf course which extends down from Neighborhood 3. Two smaller comparable developments are in the east side of the neighborhood. The remaining development consists of a condominium and standard single-family tract houses.

The only public facility within the neighborhood is the

Whittier Elementary School with a playground and ballfield. There are many developments with private facilities. Gibbel and Weston Parks are within one to two miles of various portions of the neighborhood.

In Neighborhood 4 there is currently a need for facilities to serve the retirement group. School children can be served by the Whittier School facility. Some small facility for tots (not expected to be too many in this area) might be helpful. The basic needs are for a sitting area and a neighborhood park oriented towards quiet activities. Acreage requirements for such a park could be less than the usual neighborhood park, or the park could be larger and shared with an adjacent area. Total new park acreage requirements may be from three to five acres.

Neighborhood 5. Neighborhood 5 had an estimated 1977 population of 3,140, or sixteen percent of the City's total. In 1970, twenty-seven percent of its population was eighteen and under, which is greater than for any other neighborhood. This neighborhood, particularly the western half, constitutes the most "family" area of Hemet. It is estimated that new development will be primarily "family" in nature and that the population increases will occur in the under sixty age groups. Total 1990 population is estimated at 3,530.

With the exception of a small portion of the downtown area, Neighborhood 5 is residential in nature. The residential areas nearest the downtown are of mixed types. Other residential areas are standard single-family tract developments.

There are no public or private park facilities within Neighborhood 5. Whittier, Hemet Elementary, and Acacia Schools are between zero and three-fourths mile from various parts of the area. Weston Park, to the north of Florida Avenue, is one to one and a half miles from various parts of the neighborhood. An undeveloped school site is located east of San Jacinto between Thornton and Stetson on the fringe of the City and near the southeast corner of the neighborhood. No plans currently exist for this site.

Neighborhood 5 is adequately served with playgrounds from nearby school yards. There is a need for a few tot-lots and a sitting area. The tot-lots should be oriented towards the family areas (newer tracts) and the sitting area should relate to the downtown vicinity. One tot-lot and sitting area are an immediate need. As the area develops, a small neighborhood park would also be desirable for the southern area of Neighborhood 5. As an alternative, the sharing of a larger neighborhood park with another nearby area could occur. Total new acres justified by the 1990 population, given availability of existing facilities, is approximately three to five acres.

Neighborhood 6. Neighborhood 6 extends over the most southern part of the City. The neighborhood had an estimated 1977 population of 4,849. In 1970, eleven percent of its population was eighteen and under and sixty-four percent was sixty and over. It is estimated that this same relative age breakdown will be maintained through 1990. The neighborhood is approximately fifteen percent developed. Current development is primarily residential in nature. Mobile home developments are found in the east and south. Central and eastern areas are primarily single-family developments.

There are no public park facilities in Neighborhood 6. The nearest public facility is the Whittier School which is between one-fourth and three-fourths of a mile of all currently developed family areas and over three miles from the furthest neighborhood boundary. Within the area there are many residential developments that offer private facilities. One of these, in the western end of the neighborhood, includes a private golf course that is open to the public. Another golf course is located just south of the City near the corner of Stetson and Buena Vista.

The eastern section needs a small neighborhood park or a shared facility with an adjacent neighborhood. The western section will need a complete neighborhood park when developed. One sitting area is needed in the retirement area in the south-central park. Three more sitting areas are needed by 1990 in Neighborhood 6. Total park acreage for this area should be approximately nine to twelve acres by 1990.

Neighborhood 7. This neighborhood covers the northwest portion of Hemet. Estimated population is 1,505, or eight percent of the City. It is the smallest neighborhood population-wise. In 1970, the eighteen and under population was at 22 percent, and the sixty-plus was at forty-nine percent. Total projected 1990 population is 2,550-3,600, or ten to eleven percent of the City.

Neighborhood 7 is predominantly undeveloped. Development consists principally of mobile home parks and duplexes (both with private recreational facilities), single-family residential and highway commercial along Florida Avenue. The area is served by Gibbel Park, somewhat isolated from residentially developed areas of Neighborhood 7. Portions of the neighborhood are from one-fourth to one mile from the park.

Due to the scattered nature of existing residential development and the presence of Gibbel Park, no new park facilities are currently needed. As the neighborhood infills with new development, several (three) sitting areas will be needed throughout. Areas in the northern and southern extremities

of this neighborhood will need closer neighborhood park facilities, possibly sharing with adjacent neighborhoods. Total 1990 new park facility needs are estimated at two to four acres, with Gibbel Park continuing to meet most of the area needs.

Summary. Table 1 on the next page presents a summary of neighborhood park needs. These do not include community-wide facilities which are discussed in the following section. It may be noted that of all the park types presented earlier, new playgrounds have not been recommended. This is because most of the youth population is located near the schools which have playgrounds. Also, playground-type facilities are usually included in neighborhood parks, of which there is the need for several.

Need for New Communitywide Facilities

Communitywide facilities serve the entire community including unincorporated fringe areas. At this time, we will review these needs and indicate which could be satisfied by facilities within the City and which could best be met by new facilities in the fringe area.

Community Park. As mentioned previously, there is a need for a complete facility that can serve the full range of park needs. The greatest emphasis, however, would be placed on facilities for family outings, outdoor education, and organized sports. This facility should be located in the fringe area east of Hemet where most of the "families" live and where more suitable sites are available.

Lighted Playing Fields. In the hot summer months in Hemet, outdoor evening sports are popular provided the playing area is lighted. Active sports areas in Hemet that are lighted at night are usually utilized to the maximum capacity during the summer months. The demand for more of such facilities exists now and will grow; it is not possible to accurately tell by how much.

Whichever field the City decides to light, it should try to integrate small-area active sports courts into the overall lighting, i.e., have volleyball and basketball near the baseball field.

Downtown Plazas. There is no question that Hemet's citizens would appreciate and use more green areas downtown. These would provide places to rest while shopping, places for pedestrian walkways, etc. They could also function as civic landmarks in the traditional sense of the plaza. The mini-park on Buena Vista and Florida has begun to achieve this idea in reality.

TABLE 1

Neighborhood	Existing Needs	New Park Acreage Justified by 1990 Needs	Total 1990 Needs	Total 2000 Needs
1	A sitting area & a tot-lot.	Eleven Acres	Neighborhood Park, 2 sitting areas, 1 tot-lot.	Neighborhood Park, 2 sitting areas, 1 tot-lot.
2	None	1/2 Acre	1 sitting area and 1 tot-lot.	1 sitting area and 1 tot-lot
3	Small Neighborhood Park (or larger one shared with adjacent area), 2 sitting areas and 1 tot-lot.	Five to Six Acres	Small Neighborhood Park (or larger one shared with adjacent area), 2 sitting areas and 1 tot-lot.	Small Neighborhood Park (or larger one shared with adjacent area), 2 sitting areas and 1 tot-lot
4	Small Neighborhood Park (or larger one shared with adjacent area), 1 sitting area and 1 tot-lot.	Three to Five Acres	Small Neighborhood Park (or larger one shared with adjacent area), 1 sitting area and 1 tot-lot.	Small Neighborhood Park (or larger one shared with adjacent area), 1 sitting area and 1 tot-lot.
5	Small Neighborhood Park (or larger one shared with adjacent area), 1 sitting area and 1 tot-lot.	Three to Five Acres	Small Neighborhood Park (or larger one shared with adjacent area), 1 sitting area and 2 tot-lots.	Small Neighborhood Park (or larger one shared with adjacent area), 1 sitting area and 2 tot-lots.
6	Small Neighborhood Park (or larger one shared with adjacent area), 1 sitting area.	18 to 33 Acres (23 to 58 Acres by 2000)	Small Neighborhood Park in the eastern area (or larger one shared with adjacent area), a complete neighborhood park in the western area, 4 sitting areas.	3-6 Neighborhood Parks
7	None	Two to Four Acres	2 small Neighborhood Parks (or larger one shared with adjacent area), 3 sitting areas.	2 small Neighborhood Parks (or larger one shared with adjacent area), 3 sitting areas,

Source: Owen Menard and Associates, Inc.
Updated: Gruen Associates

Golf Course. The City does not have a municipal golf course and at this time the construction of one may be too costly. Those private golf courses that are open to the public are becoming more crowded but still are not as utilized as intensively as golf courses are in many other communities. To satisfy the needs of the retirement communities, more golf courses will be required in Hemet.

CIRCULATION ELEMENT

CITY OF HEMET

ADOPTED - June 22, 1982

REVISED MARCH 22, 1983 - RESOLUTION NO. 2167

REVISED - April 24, 1984

April 9, 1985.

May 28, 1985

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I
I N T R O D U C T I O N

INTRODUCTION

Legislative Authority

The Circulation Element of the Hemet General Plan is required by California State Government Code, Section 65302 (b) which provides that all city and county general plans shall include consideration of circulation. The law specifically states the Circulation Element shall consist "of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals and facilities, all correlated with the land use element of the plan."

To conform to the legislative mandate, this element provides policies and proposals for the present and anticipated transportation needs of the City. As such, the Element addresses public passenger and freight transportation, nonmotorized transport, air, and rail.

Relationship to Other General Plan Elements

Transportation is a prerequisite to the existence and functioning of all cities. The critical role transportation plays in allowing people to meet their needs requires it to be closely integrated with all other elements of the General Plan. The fewer the impediments to transportation, the more smoothly the whole city can function. Transportation must be considered in the development of other general plan elements, such as those dealing with Seismic Safety, Public Safety and Scenic Highways. In general, there is a need to integrate plans for traffic with other kinds of planning. The circulation plan is depicted on the Land Use Element Map and in Figure 1.

Transportation and Land Use Interrelationships

As expressed in the state code, there is a special need to correlate land use and circulation planning. Transportation and land use are highly interdependent. Each type of land use will generate a predictable demand for transportation, and the nature and location of transportation facilities and vehicular flows are major influences on deciding where to locate a particular land use. Without an identifiable land use pattern, there is no way to address transportation needs. Conversely, without transportation it is impossible to implement a particular type of land use.

It is most realistic to view circulation as supporting the land use element. Perhaps the most basic, far-reaching decisions in the City involve the location of land uses. The Circulation Element is concerned with predicting what pattern of transportation demand a pattern of land uses will generate, and how the circulation flows. Thus, a major goal is to propose transportation policies for Hemet that help meet the needs of present and projected land uses.

Relationship to County Circulation System

Although the main emphasis is on circulation needs within Hemet, some attention must also be paid to adjoining jurisdictions. Since a City cannot be self-supporting, there is a need for transportation into and out of the surrounding region. This is especially true for Hemet, where a large percentage of the population which uses city services or works here is housed outside its borders. To assure that smooth traffic flow is maintained, it is also important that Hemet's Circulation Element be consistent with plans for the County. There will be some traffic that is simply passing through the city.

Contents of the Circulation Element

This Circulation Element will identify and analyze Hemet's and the Hemet region's transportation needs, particularly in terms of anticipated future land uses. Three major subparts of this process are to: (1) Predict the area's future transportation patterns; (2) identify where transportation problems are likely to arise, and; (3) propose solutions to these problems. These recommendations will be supplemented by discussions of other aspects of transportation, including public passenger movements, rail, truck and air freight requirements, and nonmotorized transportation.

This Element of the City of Hemet General Plan is essentially an update and revision of the draft Circulation Element prepared by Ultrasystems, Inc. utilizing additional data including that of Alderman, Swift and Lewis, Consulting Engineers (1982). All available background data relating to the circulation system was compiled and reviewed, including previous studies such as the Traffic Operations Study prepared as part of the Federally funded TOPICS program in 1972 by Peat, Marwick, Mitchell and Co., and the Traffic Control Devices Inventory and Control Program report prepared in 1974 by Alderman, Swift and Lewis, Consulting Engineers. Recently completed studies used as a data base included the Hemet Central Business District Parking and Circulation Study and the Southwest District Parking and Circulation Study and the Southwest Area Specific Plan prepared by Gruen Associates, Linscott, Law and Greenspan, Inc., and Ultrasystems, Inc. These studies, in conjunction with input received from City staff and prior citizen participation including input received from a questionnaire, provided the basic information about current traffic conditions and desired improvements.

II
SUMMARY OF LAND USE &
POPULATION CHARACTERISTICS

SUMMARY OF LAND USE
AND POPULATION CHARACTERISTICS

The City of Hemet has experienced substantial population growth in the past several decades. In 1960, there were only about 5,400 people in Hemet. In 1970 that had increased to 12,252, and continued to grow until it reached 22,454 in 1980. Early in 1982 the population approached 25,000. This substantial growth occurred for two reasons: (1) Hemet participated in the general growth of southern California, and; (2) it had assumed the function of a specialized retirement community.

Because of the importance of retirement, Hemet's population characteristics are quite different from those of most American cities. This is perhaps best illustrated by the fact that the median age of residents is in the mid-60's, compared to 34 years of age for the County of Riverside. This population is housed in a mixture of dwelling units that is likewise very different from that found in most cities. The most distinctive feature is the large percentage of mobile home units which accounted for approximately 40 percent of the housing stock in 1980. This type of population and housing structure can be expected to generate a somewhat different transportation demand than would be true in the average city of 25,000.

The City of Hemet is sited on an alluvial plain in the San Jacinto Valley, located about 90 miles southeast of Los Angeles. Because of the flatness of the area, problems in transportation construction and operation are minimal. The flatness contributes to flooding along Salt Creek; which leads to occasional access difficulties for some parcels of land. Only in southernmost Hemet, which includes a part of the Domenigoni Mountains, does terrain pose a possible transportation problem.

Hemet's 25,000 people live, shop, and work within a city land use pattern that is, conceptually, quite simple. Commercial and retail development is largely located in a strip along the City's major east-west street, Florida Avenue. This street includes the heart of the Central Business District (CBD), which is generally located near the center of the strip. Two additional important retailing centers are located at major intersections along Stetson Avenue in the City's southern half. North and south of the

the CBD are located the older residential areas. Stable, newer residential areas, often with mobile homes, are located in the northwest and southeast sections of the incorporated area. Present and potential sites for industry are located along the Santa Fe Railroad, which has a branch line that cuts across the western portion of the City in a southwest-northeast direction, and near Hemet-Ryan Airport. A large tract of undeveloped land constitutes the southwest portion of the City. This "Southwest Area" is a planned residential community.

III
C I R C U L A T I O N G O A L S , O B J E C T I V E S ,
& P O L I C I E S

CIRCULATION GOALS, OBJECTIVES, AND POLICIES

Introduction

California planning law requires citizens be involved in setting goals and objectives for their cities. The identification of goals and objectives can be an important, difficult step in the planning process. By necessity, goals are somewhat removed from present reality, and often vague. Nevertheless, goal formulation is important from the perspective that it can be used as a guide to future City actions.

According to the State of California, General Plan Guidelines, a goal is defined as "The ultimate purpose of an effort stated in a way that is general in nature and immeasurable." It reflects the basic values of the people of the community, and all planning efforts should be directed toward achieving the goal.

What are often nebulous goals can be seen somewhat more concretely in terms of objectives. An objective is defined as "a portion of a goal, the accomplishment of which constitutes the partial fulfillment of a goal." Since they are more specific than goals, objectives can often be quantified. A quantifiable change in an objective over time can be used to gauge progress toward a goal.

In order to define goals and objectives for Hemet, a questionnaire was made available to its citizens. This questionnaire was published in the form of a public notice in The Press Enterprise in July, 1978. The City and County also conducted workshops and public meetings in 1978 to augment the information received from the questionnaire. The statements below represent a cross-section of the opinions and concerns expressed in the questionnaire and at the meetings:

"Major traffic and circulation problems exist all along Florida Avenue. Consider the merchants in new plans. Think about diverting through traffic from Florida Avenue. Look at Acacia Street and streets north of Florida Avenue as possibilities."

"Hemet needs some one-way streets to solve the traffic problems."

"There should be a policy aimed at widening streets."

"There should be a volunteer committee for defining traffic problems."

"Parking is not a problem."

"Study Route 79 and Sanderson Avenue." (i.e., relocation of Route 79 to Sanderson)

"Divert commercial traffic onto the Ramona Expressway (truck route)."

"Dial-a-Ride is very important to the elderly and handicapped who are transit-dependent."

"Blind intersections are a problem."

In addition, meetings were held with various government agencies at the city, county and state level, and the concerns of the business community were heard.

Goals and Objectives

Based on this process, the goals and objectives listed below seem to represent the broad consensus of the community, as they apply to transportation. As far as practical, they should serve as a general guide to transportation planning in the future:

Goal: To develop an efficient, safe, and effective transportation system which is integrated with the future land use pattern of Hemet and responsive to the travel aspirations of its citizens.

Objectives:

1. Develop a circulation network adequate to serve Hemet's planned land uses.
2. Develop a circulation plan sufficiently flexible to accommodate short term improvements while maintaining the integrity of the long range plan.
3. Establish a policy aimed at improving the existing street system in conjunction with new land use developments to assure adequate system capacity.

4. Develop a policy that will enhance circulation in the CBD in lieu of accommodating further urban sprawl.
5. Formulate a policy to maintain the integrity of the adopted master plan of highways by securing the designated rights-of-way when new land development is approved.

Goal: To develop a transportation network that is financially, politically and technically possible to implement.

Objectives:

1. Develop a circulation plan that is compatible with planned networks for adjacent jurisdictions.
2. Develop a policy of obtaining citizen input in all aspects of transportation and land use planning and development.
3. Maximize the use of available Federal, State and local (Riverside County) funds and subsidies in the planning and implementation of the adopted Circulation Element

Goal: To develop a circulation system that reflects the special needs of the transit dependent.

Objectives:

1. Develop a policy aimed at monitoring the needs of the transit dependent and implement service improvements when feasible.
2. Encourage the continuation and use of demand responsive public transit (Dial-a-Ride).
3. Devise a circulation system that integrates the car, bicycle, and public transit into a compatible, balanced, multi-modal system.

Inevitably, conflicts will arise in the specific applications of these goals and objectives to the planning process. Goals and objectives also need to be updated periodically, as the needs and attitudes of the community change.

Circulation Policies

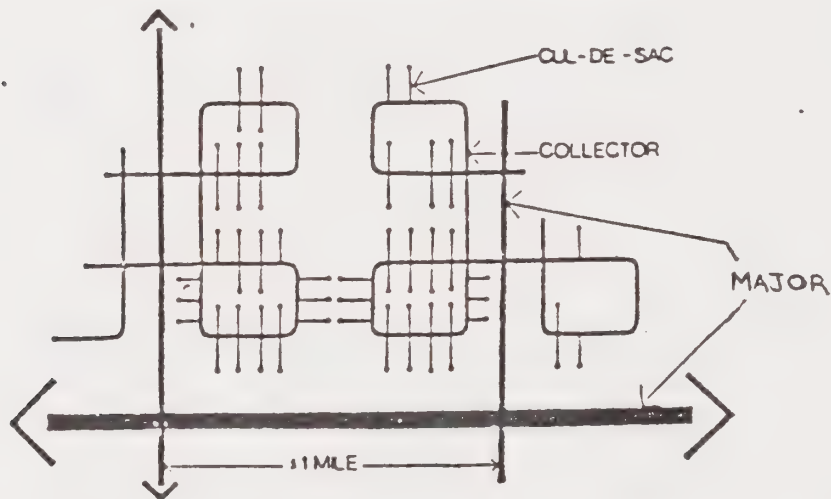
The aim in establishing circulation policies is to satisfy the stated goals and objectives of the community served by the transportation network. The network should be designed to provide a framework for land uses, reinforcing the neighborhood concept of development. The objective is to create a hierarchical system of circulation comprised of major and secondary highways which accommodate through traffic, collectors which provide for circulation within the neighborhood, and local streets which provide for access to individual lots. The ultimate goal of these policies is to develop an efficient, safe and effective transportation system which integrates the car, bicycle and public transit into a compatible, balanced, multi-modal circulation system that is responsive to the desires and aspirations of the community it serves.

The policies listed below are meant to be a general guide in future planning. If they are followed, they will help the community achieve its transportation goals and objectives. These policies should be evaluated and updated periodically in response to changing conditions in the community.

1. Short term transportation improvements should maintain the long range integrity of the ultimate master plan of highways.
2. The existing street system should be improved in conjunction with new land development according to adopted City standards.
3. New land development should involve dedication of the necessary right-of-way established by the adopted master plan so as to maintain the integrity of the ultimate circulation system.
4. Adequate traffic circulation and access should be provided and maintained within the Hemet Central Business District.
5. The recommended system of one-way streets in the CBD and the parking recommendations should be adopted, and the one-way system should be extended to the eastern and western City limits along Acacia and Devonshire to accommodate 1990 traffic levels in the Florida Avenue Corridor.
6. Where there is no conflict with local projected circulation needs, the compatibility between the Riverside County and City of Hemet Circulation Elements should be encouraged.
7. Control of access should be maintained to facilitate smooth traffic flow (if possible, at the "C" level) and increased traffic capacity and safety.

8. Major or secondary highways, in general, should be one mile apart, but greater spacing should be permitted where low-intensity land uses exist.
9. Intersections on major and secondary highways should be spaced at quarter mile intervals, at a minimum.
10. Commercial driveway access shall provide adequate distance from intersections, as stipulated by accepted engineering practices.
11. Residential access shall be restricted on major and secondary highways.
12. Through traffic in neighborhoods shall be discouraged by creating discontinuities in the local street system, intersection offsets, circuitious street configurations, and cul-de-sacs, as illustrated conceptually below.

HIERARCHICAL STREET PATTERN



13. Local and collector streets shall link with secondary and major highways and shall provide for intra-neighborhood circulation.
14. Access to non-residential traffic generators, such as schools, recreation centers, and shopping centers, shall be provided from a collector, secondary or major highway, to minimize traffic on local residential streets.

15. Local neighborhood streets shall be designed to discourage unsafe driving practices, such as speeding, through the use of curvilinear streets or other techniques.
16. Pedestrian-vehicle conflicts shall be minimized through the use of cul-de-sacs, looped streets, or special pedestrian walkways between major traffic generators.
17. Neighborhood intersections shall be minimized.
18. Streets shall intersect at 90 degrees, or as close to 90 degrees as possible, for better traffic control and safety.
19. Reasonable public transit vehicle requirements, such as adequate turning radii, street widths and intersection design, shall be met in neighborhood street design.
20. Citizen input in transportation planning and development matters shall be encouraged to insure that the goals and desires of the community are considered when decisions are made relating to circulation improvements.

The following policies in regard to bikeways and public transportation services are also recommended:

1. In line with current Caltrans policy, Class I bikeways shall not be considered feasible except under unusual circumstances.
2. Where space permits, Class II bikeways, (bike lanes) should be provided along secondary and major highways, and along lesser streets if necessary to assure system continuity and service to all major traffic generators.
3. Bicycle support facilities, such as drinking fountains and rest areas, shall be provided at community parks and elsewhere, if economically feasible.
4. To accommodate the anticipated increased use of the adult tricycle, all Hemet bikeways shall be constructed to standards which will allow for the safe operation of such vehicles.
5. Demand-responsive public transit (Dial-a-Ride) shall be encouraged. Where practical, small vans or buses should be used. If existing public subsidies for such services are cut, every effort should be made to make local subsidies available.

6. Taxi service shall be encouraged in order to provide additional mobility to those without automobiles or a valid license.
7. If the Santa Fe Railroad line through Hemet is abandoned, efforts should be directed at obtaining the right-of-way for alternate uses, such as a bicycle path, and/or for CBD redevelopment. State funds should be sought for this.
8. If transit patronage warrants, and if economically feasible, fixed-route service should be implemented. In that case, demand-responsive and para-transit services should be encouraged to provide supplementary service.
9. If the community desires, commuter air service (passenger and freight) to Los Angeles, using modern, quiet airliners, should be encouraged.
10. Common carrier truck service should be encouraged in order that local industries maintain good access to the national economy.

Circulation System Recommendations

Based on the findings and projections contained in Sections IV and V and the Appendixes of this General Plan, a number of recommendations about the future share of Hemet's circulation system can be made, as well as for the adoption of policies to guide development for that system. In the following Section, adopted recommendations are listed displaying changes to the Hemet-San Jacinto General Plan of Highways.

As a general planning rule, it is highly desirable that plans for adjoining jurisdictions be compatible with each other. In Hemet, separate circulation plans have previously been prepared for both Riverside County and the Hemet-San Jacinto region. There are a number of discrepancies between these documents. In some cases, however, local traffic projections indicate that the Riverside County plans would be inadequate to handle anticipated traffic. (See comparison in Appendix A.)

The street and right-of-way designations adopted below attempt to integrate the Riverside County Plan and the City's expected circulation needs. Appendix C evaluates the reasoning behind these recommendations.

1. Devonshire Avenue to be 88' right-of-way secondary highway from Meyers Street to Park Avenue/Cornell Street. Section between San Jacinto and Mayflower Street secondary highway 88' right-of-way.
2. Whittier Avenue a 66' right-of-way collector from Lyon Avenue to San Jacinto Street.
3. Whittier Avenue a secondary highway, 88' right-of-way, from San Jacinto Street easterly.
4. Whittier Avenue a local collector street, 66' right-of-way, between Warren Road and Cawston Avenue.
5. Girard an 88' right-of-way from Devonshire to Stetson Avenues. Girard Street to Crest an 88' right-of-way secondary highway.
6. Palm Avenue a 60' right-of-way between Menlo Avenue and Stetson Avenue.
7. Palm Avenue north of Menlo Avenue and south of Stetson Avenue a secondary highway of 88' right-of-way.

8. Lyon Avenue north of Acacia a secondary 88' right-of-way.
9. Lyon Avenue a 66' right-of-way collector street between Acacia and Stetson Avenue.
10. Lyon Avenue between Stetson Avenue and Simpson Avenue, secondary highway, 88' right-of-way, with all-weather bridge crossings of Salt Creek Channel.
11. Lyon Avenue south of Simpson Avenue secondary highway, 88' right-of-way.
12. State Street an 88' right-of-way secondary highway.
13. San Jacinto Street an 88' right-of-way secondary highway.
14. Stetson Avenue an 88' right-of-way secondary highway from future Aqueduct Road to San Jacinto Street. Stetson Avenue align along AT & SF railroad west of Cawston.
15. Stetson Avenue east of San Jacinto Street a major highway, 100' right-of-way.
16. Sanderson Avenue a major highway, 100' right-of-way, throughout City and onto Simpson Road. Major all-weather bridge crossings across Salt Creek Channel at Simpson Street and east of Warren Road.
17. Harrison Avenue a secondary highway from Aqueduct Road to Sanderson Avenue.
18. Fisher Street a 66' right-of-way local street between Stetson Avenue and Stetson Avenue realigned.
19. Fisher Street a secondary highway, 88' right-of-way between Stetson realigned and Harrison Avenues.
20. Extend Simpson as a major highway eastward to Sanderson and as a secondary highway eastward to State (formerly the planned extension of Harrison Street).
21. Cawston Avenue a secondary highway from Whittier Avenue 88' right-of-way extended to Florida and north to the County area.

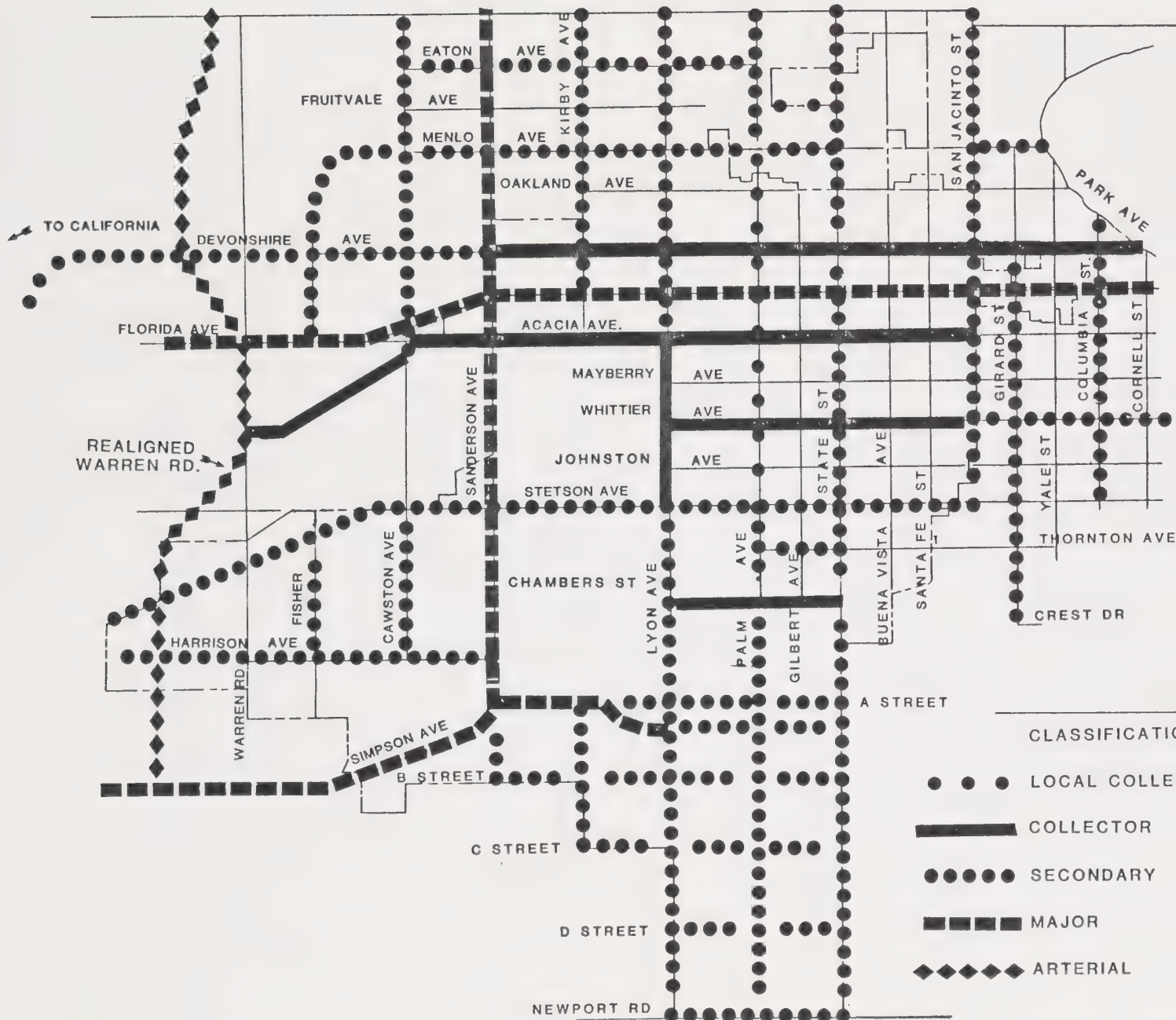
22. Thornton a secondary highway, 88' right-of-way between Palm and State.
23. Acacia Avenue a secondary highway, 88' right-of-way between Cawston Avenue and San Jacinto Street.
24. Myers Street a secondary highway, 88' right-of-way between Florida and Menlo Avenue.
25. Menlo Avenue a secondary highway, 88' right-of-way between Myers Street and State.
26. Menlo Avenue a secondary highway, 88' right-of-way between San Jacinto Street and Park Avenue.
27. Eaton Avenue a secondary highway, 88' right-of-way between Cawston and Palm Avenue.
28. Columbia a secondary highway, 88' right-of-way between Stetson Avenue and Park Avenue.
29. Cawston Avenue a secondary highway, 88' right-of-way between Harrison and Stetson Avenue.
30. Florida Avenue a major highway, 100' right-of-way, from the California Aqueduct to the County area east of Hemet.
31. The California Aqueduct, a major freeway, which would follow an alignment along Warren Road north of the City and swing to the west around the airport to align generally with California Avenue.
32. Warren Road between Stetson Avenue realigned and Simpson Road a secondary highway of 88' right-of-way.
33. Warren Road from Stetson Avenue realigned to Florida, a secondary highway, 88' right-of-way.

34. State Street between Chambers Street and Newport Road - 88' of right-of-way.
35. Palm Avenue between Chambers Street and Newport Road - 88' of right-of-way.
36. Lyon Avenue between Chambers Street and Newport Road - 88' of right-of-way.
37. Kirby Street between the north line of Annexation No. 68 - 88' of right-of-way.
38. Sanderson Avenue along the west line of Annexation No. 68 - 88' of right-of-way.
39. "A" Street between State Street and the west line of Annexation No. 68 - 88' of right-of-way.
40. "B" Street between State Street and the west line of Annexation No. 68 - 88' of right-of-way.
41. "C" Street between State Street and the southerly projection of Kirby Street - 88' of right-of-way.
42. "D" Street between State Street and the southerly projection of Lyon Avenue - 88' of right-of-way.
43. Newport Road between State Street and the southerly projection of Lyon Avenue - 88' of right-of-way.
44. Chambers Street, between State Street and Lyon Avenue - 88' of right-of-way.
45. Acacia Avenue between Florida and San Jacinto, reduced from 88' right-of-way to 66' right-of-way.
46. Fisher Street, south of Stetson, between Stetson and the Railroad Tracks, 66' of right-of-way requirement deleted.
47. Devonshire Avenue between Sanderson and Cornell reduced from 88' right-of-way to 66' right-of-way.
48. Fruitvale, between State Street and Palm Avenue - 66' of right-of-way.
49. Devonshire Avenue, from Myers Street to California, 88' of right-of-way.

Items numbered 34 through 49 above were adopted by the Hemet City Council on the following dates and not discussed in Appendix C:

1. Items numbered 34 - 44 adopted March 22, 1983.
2. Item number 45 adopted April 24, 1984.
3. Item number 46 adopted April 9, 1985.
4. Items numbered 47 - 49 adopted May 28, 1985.

MASTER PLAN STREET CLASSIFICATION



LEGEND

CLASSIFICATION	RIGHT OF WAY
● ● ● LOCAL COLLECTOR	60 FEET
— COLLECTOR	66 FEET
● ● ● ● ● SECONDARY	88 FEET
— — — — — MAJOR	100 FEET
◆ ◆ ◆ ◆ ◆ ARTERIAL	110 FEET

IV
C I R C U L A T I O N C H A R A C T E R I S T I C S
I N H E M E T

CIRCULATION CHARACTERISTICS IN HEMET

General Characteristics

Into the foreseeable future, the automobile will account for the vast majority of personal trips within Hemet. Hemet is typical of newer western American cities, which have experienced most of their growth in the automobile era, in that land use intensities are low. Such a land use pattern, with its widespread distribution of trip origins and destinations, can be served effectively and (relatively) efficiently only by an extremely flexible form of transportation, i.e., the car. Under these conditions, the provisions of fixed route public passenger transportation (even with buses) normally is infeasible, both from a fiscal and level-of-service perspective. Further, Hemet's residents have said that they value this type of low density city, and want to retain the same basic form in future developments (1978, Goals Program).

While the automobile offers unmatched mobility to licensed drivers with access to a car, inevitably some proportion of the population does not share in this mobility. People who are too young, too old, handicapped, or without a valid license may have serious mobility problems. For them, even the seemingly simple desire to go to a grocery store or to a park can mean a major transportation problem. Often they have to rely on others for mobility, perhaps at the cost of considerable independence of self-esteem. It is ironic that a city whose layout assumes the great mobility offered by the car may also have many people with a serious transportation problem. To the extent that mobility is perceived as a valued personal freedom, this is an important social problem.

While standard, fixed-route forms of public transportation are not efficient in Hemet, two other modes are well suited to the City's internal geography. One is the common taxi, which is simply the public transit form of the private automobile. Demand-responsive systems, such as Dial-a-Ride, can also use appropriate small equipment and can provide good service to a low density population. Unfortunately, both systems are labor-intensive, and therefore costly to operate. For taxis, this translates into fairly high charges per mile; thus, not all people may be able to afford using them. Dial-A-Ride and fixed route systems are currently in operation; However, with current government attitudes toward subsidies for social services, future funding for such systems cannot be assured.

Classifications of Roads

The street network of any community is composed of a hierarchical structure of different types of roads, each with a different function and traffic capacity. The five (5) major classifications are shown in Table I with the City of Hemet right-of-way and pavement widths for each category. Some main characteristics of these streets are noted in Table II, including their 24 hour, two-way traffic capacities.

TABLE I

<u>Highway Classification</u>	<u>Right-of-Way</u>	<u>Width</u>
Local Road	60 feet	40 feet
Collector Highway	66 feet	44 feet
Secondary Highway	88 feet	64 feet
Major Highway	100 feet	76 feet
Arterial Highway	110 feet	86 feet
Expressway/Freeway	Variable	Variable

Typical cross sections for the various types of roads in the Riverside County Plan are illustrated in Figure 2.

Capacity, Traffic and Driver Satisfaction

Capacity is generally defined as the maximum number of vehicles which has a reasonable expectation of passing over a given section of roadway under prevailing roadway and traffic conditions.¹ One of the more important elements limiting and often interrupting traffic flow on a highway, especially in urban areas, is the at-grade intersection; e.g., not allowing driveways near intersections removes potential traffic conflicts, smoothes out the flow, and increases capacity. For this reason, capacity investigations in urban areas typically focus on the intersection during the peak traffic hours.

Any intersection approach has a capacity which represents the maximum number of cars that can be accommodated, given the particular geometrics, environment, traffic characteristics and controls. Driver operation is far from satisfactory to most capacity, with substantial delays likely.

1 Highway Capacity Manual - 1965, Highway Research Board Special Report 87, National Academy of Sciences, National Research Council.

For that reason, a relative measure of driver satisfaction, or "Level of Service", has been developed to describe the range of operating conditions encountered by motorists as they traverse a given segment of highway.

Levels of Service range from Level A to Level F. Service Level A represents a condition where no approach phase is fully utilized, the intersections appear quite open, and turning movements are easily made. Level of Service F represents a severely restricted condition, referred to as unstable flow, where there are long queues of vehicles and where delays may be great. Level D is typically selected as the "maximum acceptable level" for urban design, and is characterized by conditions approaching unstable flow where delays may be substantial for short times within the peak period, but where enough signal cycles of lower demand occur to permit clearance of the accumulated traffic. Each service level has associated with it a directional approach volume or "service volume" which indicates the maximum volume that can be accommodated within that level (See Table II).

TABLE II
STREET CAPACITIES

<u>Street Classification</u>	<u>Number of Lanes</u>	<u>Design (1) Capacity (Vehicles/day)</u>	<u>Maximum (2) Capacity VPD</u>
Local Road	- - - - -	NOT A PART OF STUDY	
Collector Highway	2	2,000	18,000
Secondary Highway	4	20,000	30,000
Major Highway	4	24,000	38,000
Arterial Highway	4	24,000	38,000
Expressway/ Freeway	- - - - -	NOT A PART OF STUDY	

- (1) Defined by County Road Department as a stable flow condition in which volume and density restrict freedom to select speed, change lanes, or pass. Values indicate Average Daily Traffic.
- (2) This value reflects the absolute maximum volume under ideal conditions. This level of service is characterized by unstable flow, extremely high volumes and limited operating speed with intermitten vehicle queing. Values indicate Average Daily Traffic.

The capacity limits mentioned above assume that the same cross-section is maintained along the entire length of a highway. However, actual capacity limits often are set by the congestion found at major intersections, and mid-block capacities may be considerably underutilized. In such cases, it is usually most cost-effective to employ intersection widening techniques. Thereby capacities often can also be expanded considerably beyond the theoretical levels noted above.

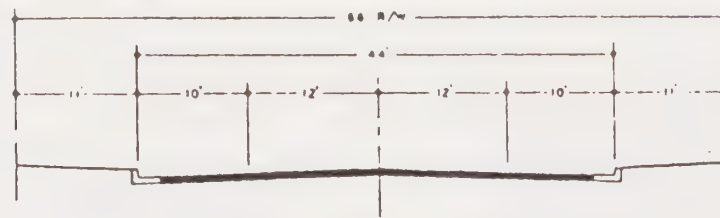
In transportation planning, theoretical capacities are often compared to projected traffic volumes in order to recommend the type of highway appropriate for each part of the system. In this process, any capacity surplus or deficit is balanced along parallel routes and across screen lines to develop a recommended highway system. This procedure assumes that the local street system will be designed so as to input local traffic evenly into higher level facilities. It also assumes intersection widening where a particular cross-section cannot be justified over the entire link.

Existing Traffic Patterns

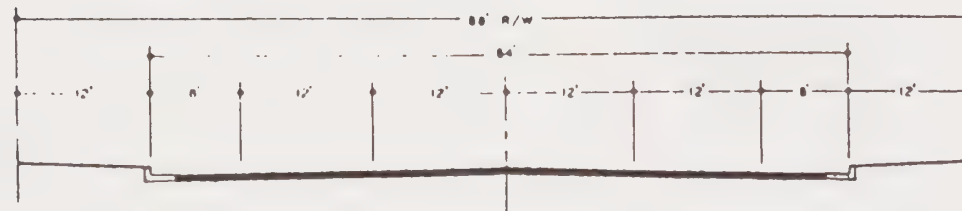
In order to obtain information on present traffic flows, an extensive program of 24-hour machine counts was conducted in the City.* These data were supplemented by manual turning movement counts conducted at select intersections within the City. When put into map form (Fig.3), the resulting information gives an excellent overview of traffic flow in Hemet. Such information also provides a data base for forecasts of future traffic patterns. This traffic flow information is summarized in another form in Appendix D.

An examination of current flows shows that both north-south and east-west traffic is highly concentrated on a few routes. East-west movement is dominated by Florida Avenue; that street accounts for about 58 percent of the total east-west flow. Volumes on Florida tend to increase toward the east, with the highest total in the CBD area just east of San Jacinto Street. Stetson has the second heaviest east-west traffic level.

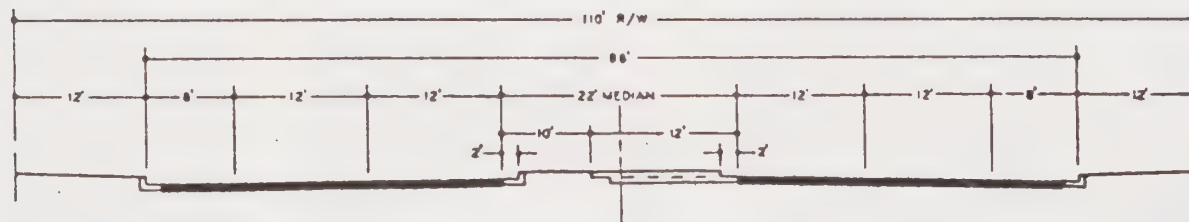
*Counts conducted by Car Counter Company, Playa Del Rey, CA.



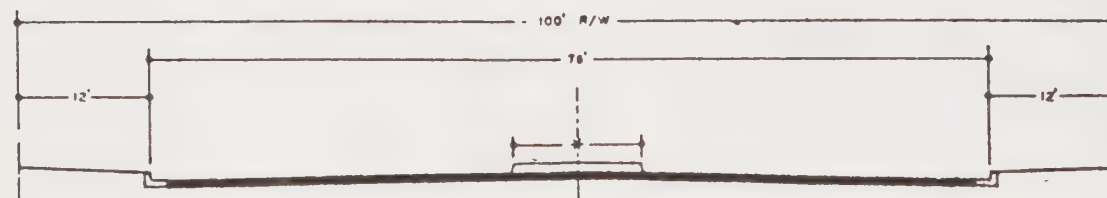
COLLECTOR HIGHWAY



SECONDARY HIGHWAY



ARTERIAL HIGHWAY



* VARIABLE BARRIER OR PAINTED MEDIAN (d TO 12')

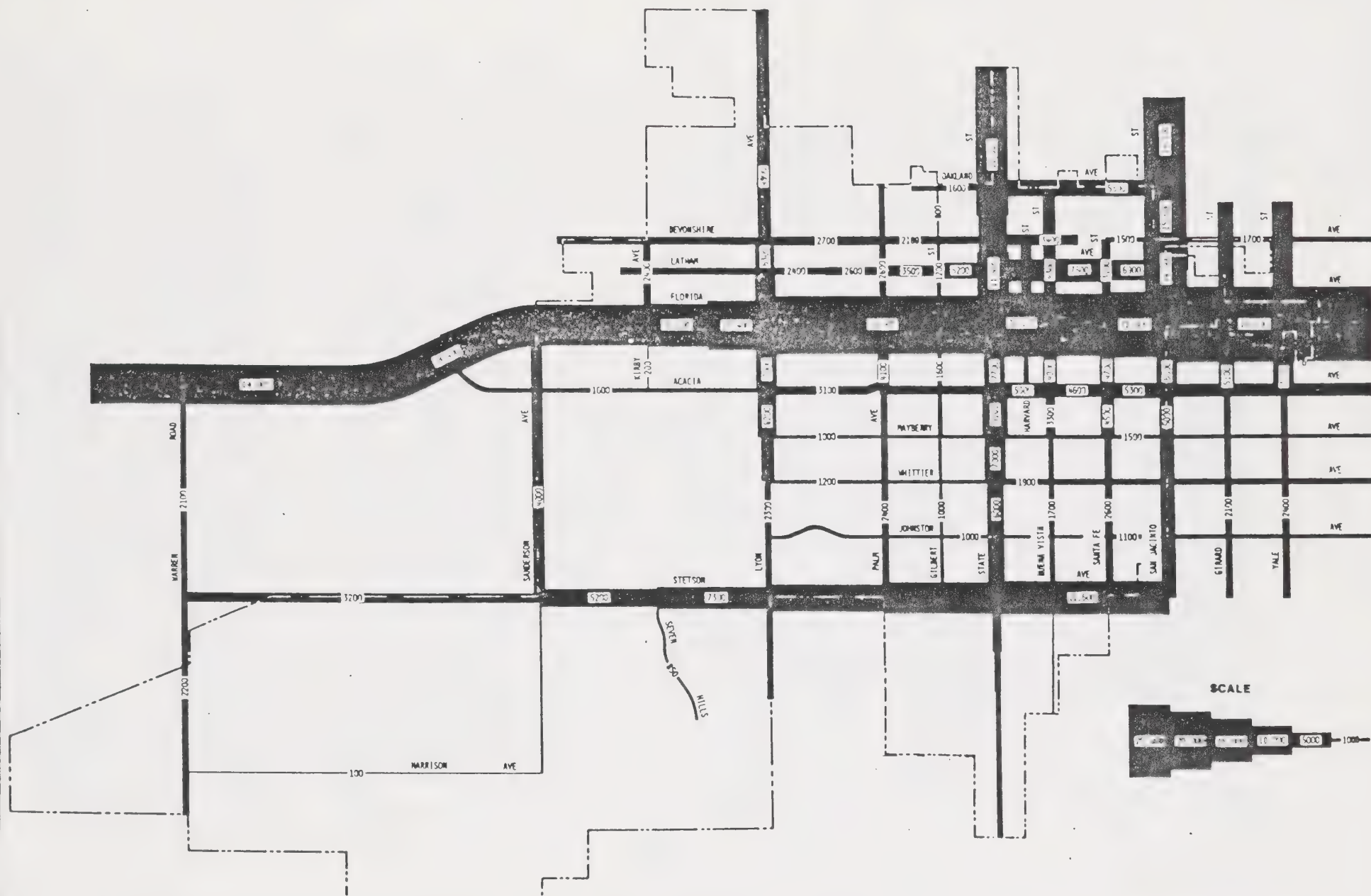
MAJOR HIGHWAY

Source:

Riverside County General Plan

Title:

Figure 2
TYPICAL CROSS-SECTIONS
CIRCULATION ELEMENT
RIVERSIDE COUNTY GENERAL PLAN



Source: Car Counter Company, Playa del Rey
1978
Linscott, Law & Greenspan, Inc.
1978

Title: Figure 3
Existing Traffic Flow

North-south traffic volumes are also highly concentrated on a few streets. The heaviest traveled streets in this direction are State and San Jacinto, which jointly handle about 56 percent of the daily recorded traffic. San Jacinto has the highest usage, with volume peaking in the section just north of Florida Avenue. The City's busiest intersection is therefore at Florida and San Jacinto and the traffic problem at the intersection is compounded by the large number of turning movements.

Since Florida Avenue is the heaviest traveled road in the City, and because citizens expressed concern over its congestion, it was subject to further study. Early in 1979, a study was conducted to determine the percentage of traffic on that street which constituted "through" movements. This license plate survey revealed that roughly 22 percent of the cars on the street were simply traveling through the CBD on Florida; the other 78 percent has had origins or destinations within the CBD. This finding implies that a significant amount of congestion here could be avoided if a through route around the center of the Central Business District were provided. This possibility is discussed further in the section dealing with the possible establishment of a one-way street system in parts of Hemet. The two-volume Hemet Central Business District Parking and Circulation Study takes up this subject in detail.

Other Aspects of Circulation in Hemet

Public Transit and Taxi Service.

At the present time, public transportation is available in the Hemet area. A taxi service is available only from the Valley Cab Company. A Dial-a-Ride service, is also available and widely perceived to be quite successful. The latter service receives a public subsidy. Fixed route bus service is provided within the City, but in a limited manner by the Riverside Transit Authority.

Public Freight Transportation.

Both rail and truck freight service are currently available in Hemet. Trucking accounts for the great majority of freight handled. Truck service is provided both on a regular scheduled and un-scheduled (truck-load) basis. Nine companies provide regular, direct truck service to Los Angeles.

Rail service is provided via a branch line of the Atchison, Topeka and Santa Fe Railroad. Service consists of one local freight train a day, connecting with

the company's main line in San Bernardino. As is true of rail branch line service all over the country, the future of this line is not assured. However, even if abandonment were to take place, Hemet shippers could still gain access to excellent rail piggyback service via a relatively short truck connection in the Los Angeles area.

Hemet Ryan Airport

Hemet-Ryan Airport is a general aviation field, with no scheduled service at the present time. In the past, commuter service to Los Angeles has been available, but it was not successful. The airport is an important base for Forest Service air tankers, and this function provides some employment in the area.

The area near the Hemet-Ryan airport is zoned for commercial and industrial use. In the future, industries are expected to be attracted to this location, but this attraction seems highly unlikely since the possible establishment of scheduled air cargo service is remote, at best. Rather, industries will probably be attracted there because the land is favorably zoned.

Nonmotorized Transportation.

The bicycle is rather widely used in Hemet, often by retired persons who are interested in the low cost and cardio-vascular benefits of bicycling. The City had a bicycle study prepared by Owen Menard and Associates in 1973. This was an excellent study for the time, but it is in need of updating. Not only has the City grown considerably since then, but the system proposed consisted largely of separate Class I bikeways (bike paths), which are not currently favored by Caltrans.

Because of its elderly population, the adult tricycle is particularly popular in Hemet. Any recommendation for a bicycle plan or facilities must consider this form of bicycling.

If, at some time in the near future, the Santa Fe Railroad abandons its route through Hemet, consideration should be given to acquiring the right-of-way and turning it into a bike path. The rail line may make an excellent bikeway from the new Southwest Area developments into the heart of the City.

Hemet's flat terrain allows the bicycle to provide an alternative mode of transportation for many people. To the present time, the City has hardly taken advantage of this fact. In the future, some planning effort should address accommodating those citizens of Hemet who may want to take advantage of the health benefits and low costs of this mode.

V
T R A F F I C G R O W T H P R O J E C T I O N S

TRAFFIC GROWTH PROJECTIONS

Future Traffic Generation and Distribution

Following the compilation of existing data, the next step involved projecting future traffic volumes within Hemet. The projections were based on expected future land use developments (as contained in the Land Use Element). In turn, information on the expected size and distribution of the future population and the way this population would likely interact with various land uses (e.g., shopping and employment) was used to project the overall pattern of future demand for automobile transportation. This information was coordinated with origin-destination studies conducted by Caltrans at the regional level, based on the expected future distribution of residential, commercial and industrial areas in the city and county.

Conceptually, the process of predicting future traffic patterns is quite simple. Given the expected future land uses in the Hemet region, it is possible to estimate the total number of daily trips each of these uses will generate (Trip Generation Model). This will give an estimate of the total traffic generated at some future date in the region. Estimates of the amount of traffic simply passing through the region (e.g., on Highway 74) must also be included in the calculations.

The trips generated by each land use are then allocated to various destinations (e.g., shopping areas) in the region, based on information on where the various needs are likely to be met (Trip Distribution Model). The total number of trips predicted between various parts of the city and region are then assigned to a specific routing, subject to congestion and other constraints (Route Assignment Model). Since only automobile trips were considered in this analysis, the fourth stage (Modal Split) in the transportation planning process did not have to be considered.

This basic approach was applied to Hemet in the following way. The city and surrounding area was divided into traffic zones, with traffic generation potential identified for each zone based on anticipated land uses. Traffic was then distributed between zones, based upon a "trips produced" and "trips attracted". These trips were then assigned to a specific route between these zones, based on estimated travel time and distance. The procedure is similar to that used by a driver when deciding which route to use in going to a destination. Usually, he will choose the route he thinks will be the fastest and most convenient, based on anticipated road and traffic conditions. When several routes are likely to be perceived as equally desirable, the traffic is divided among them. These data were supplemented by estimates of future through traffic on each route.

The result of this process is a forecast of future traffic patterns within Hemet. These forecasts are basic to the planning process, for they can be compared with current and planned road capacities to anticipate where traffic bottlenecks may develop. Such forecasts are necessary to recommendations for the future size (classification) and location of the various types of roadways. Thus, if the theoretical capacity of roads in the current circulation system is inadequate for anticipated volumes, changes in the plan may be called for. It is also possible that alternate routes would be recommended, particularly if it is difficult to upgrade certain roads because of prior development.

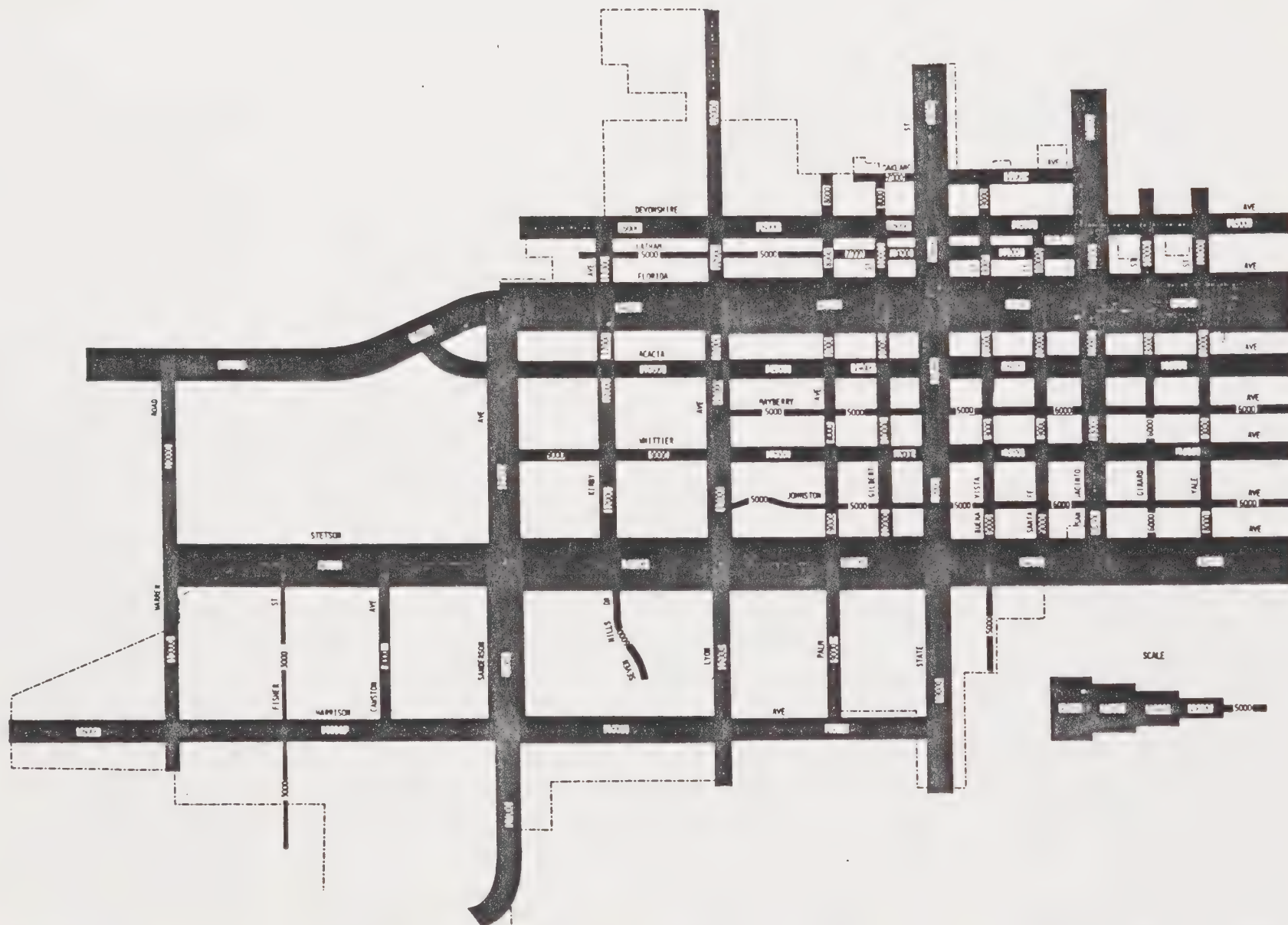
Projecting 1990 Traffic Levels and Distribution

One of the most important steps in predicting 1990 traffic levels is to project the population of the city and surrounding county areas in that year. SCAG population projections for Hemet and the San Jacinto Valley point toward a city population of roughly 30,000 by that date. It is possible, however, that with annexations and the rapid development of the Southwest area, that figure may be exceeded. That part of the San Jacinto Valley outside the city boundaries is expected to experience a population increase of roughly 30,000 by 1990.

These population increases will also lead to an increased demand for transportation in the region. The actual resulting geographic pattern of trips depends on the type, character, intensity and location of the various land uses that will be in existence by that time. The expected pattern of land uses is described in detail in the Land Use Element.

Based on these population and land use projections, an estimate was made of the volumes of 1990 traffic and their distribution. These estimates are presented in map form in Figure 4.

It should be noted that the volumes assigned to each route represent travel desire lines, and do not necessarily represent how traffic volumes would appear in 1990. Put in different terms, the assigned volumes were not limited to the theoretical capacity of the segments under consideration. Essentially, such an assignment assumes that every time a traffic volume along a route develops because of increased usage, the street's capacity is increased to meet that demand.



Source:

Linscott, Law & Greenspan, Inc.
1978

Title: Figure 4 4

1990 Traffic Forecast*

*Based on anticipated land use and SCAG
population projections

The results of these projections were then used to pinpoint likely traffic problem areas in Hemet in the future. Specifically, the traffic projections (V) were compared to the ultimate planned traffic capacities (C) of the streets. This comparison was made via the V/C ratio, where an index value of 1.00 would mean that a street's expected future traffic level was equal to its planned capacity (at smooth traffic flow). A value over 1.00 means that expected traffic volumes are higher than the road can handle without congestion problems; the higher the index figure, the worse the expected congestion.

The V/C ratio can be used to establish a priority of potential road improvement projects for the city. When improvement and construction funds are scarce, it is logical to recommend that those routes with the highest anticipated index value be given the highest priority, so that future traffic problems can be minimized. Assuming that traffic growth is as predicted in the model, such a priority system can be a valuable planning tool. Table III provides the projected V/C ratios for the main streets of Hemet, assuming they are improved to their ultimate planned capacities by that date.

As Table III shows, Florida, Stetson and San Jacinto have the largest anticipated shortfalls in capacity to demand. Thus, the streets handling the largest present traffic volumes also should be ranked highest in any priority ordering of improvements. The greatest congestion problems, even assuming improvement to ultimately planned capacity, should occur on Stetson between Sanderson and State; only moderately smaller congestion problems can be anticipated on the same street between State Street and the city's eastern boundary and on Florida Avenue east of its intersection with Lyon. Some possible implications of these findings are: 1) That new major roads (especially east-west roads) may be needed in the long run to relieve anticipated problems; 2) that a one-way street system may be required in locations in addition to the Florida Avenue corridor, or; 3) perhaps even that a lower rate of population increase than anticipated may be desirable so that traffic congestion problems do not become intolerable. In any case, further study would appear to be justified wherever the V/C index implies that future demand exceeds the planned roadway capacity.

TABLE III

PROJECTED 1990 V/C RATIOS

EAST-WEST STREETS

Oakland (assuming 10,000 ADT capacity)

San Jacinto to State	1.10
West of State	.70

Devonshire

Western boundary to State	1.45
State to eastern boundary	1.36

Latham

Kirby to Palm	.45
Palm to Gilbert	.63
Gilbert to State	.91
State to San Jacinto	1.00

Florida

West of Sanderson	1.15
Sanderson to Lyon	1.70
Lyon to eastern boundary	2.00

Acacia

Florida to Lyon	1.09
Lyon to State	1.27
State to eastern boundary	1.45

Mayberry

Lyon to Buena Vista	.45
Buena Vista to eastern boundary	.54

Whittier

Sanderson to Lyon	.82
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TABLE III (continued)

Lyon to State	1.09
State to eastern boundary	1.18
<u>Johnston</u>	
Lyon to Buena Vista	.45
Buena Vista to eastern boundary	.55
<u>Stetson</u>	
Warren to Sanderson	1.56
Sanderson to State	2.17
State to eastern boundary	2.00
<u>Harrison</u>	
Western boundary to Sanderson	.94
<u>Simpson</u>	
Sanderson to Lyon	.95
Lyon to State	.80
<u>NORTH-SOUTH STREETS</u>	
<u>Warren Road</u>	
Florida to southern boundary	.58
<u>Cawston</u>	
Stetson to Harrison	.47
<u>Sanderson</u>	
Florida to Stetson	1.10
Stetson to Harrison	1.30
South of Harrison	.85
<u>Kirby</u>	
Devonshire to Stetson	.71

TABLE III (continued)

Lyon

North of Florida	.71
Florida to AT&SF railroad	1.54
AT&SF railroad to Stetson	1.70 (assuming 10,000 ADT capacity)
Stetson to southern boundary	.71

Palm

Northern boundary to Whittier	.80 (assuming 10,000 ADT capacity)
Whittier to Simpson	.90

Gilbert

Oakland to Devonshire	.73
Devonshire to Stetson	.91

State

Northern boundary to Florida	1.47
Florida to Whittier	2.35
Whittier to Stetson	1.18
Stetson to southern boundary	1.12

Buena Vista

Oakland to Florida	.82
Florida to Acacia	.91
Acacia to Stetson	.82
Stetson to southern boundary	.45

Santa Fe

Devonshire to Acacia	.91
Acacia to Stetson	.82

TABLE III (continued)

San Jacinto

Northern boundary to Florida	1.67 (assuming 15,000 ADT)
Florida to Acacia	1.82
Acacia to Whittier	1.64
Whittier to Stetson	1.45

Girard

Northern boundary to Florida	.91
Florida to Acacia	.73
Acacia to Stetson	.54

Short Term Improvements

One of the major concerns of the citizens of Hemet is the existing condition of traffic along Florida Avenue. Among the changes recommended at citizen and staff meetings to alleviate this problem are the diversion of truck and through traffic to other streets, the development of a one-way system of streets, and roadway widening. The fact that future commercial/retail development is expected to continue to concentrate along this street, and the great difficulty and expense that would be involved in widening Florida, suggests that traffic conditions (which already are often at the "D" level) will get worse in the future. This expectation is supported by traffic projections for Florida, which point to much higher future traffic levels. This problem exists, and is expected to continue at a peak level within the Central Business District.

The recent Central Business District Parking and Circulation Study was directed at suggestions for improving the transportation problem within that area. Several proposals for improvements were outlined therein, including the relocation of parking, the removal of angle parking along Harvard Street, and a four-phase program to develop a one-way street system. Implementation of the latter within and near the CBD would help alleviate serious traffic problems in a number of ways. Specifically, traffic problems along Florida would be reduced by: 1) Redistributing traffic to other streets within the CBD; 2) minimizing the number of intersection conflict points; 3) reducing the high percentage of turning movements, and; 4) providing an east-west, one-way couplet that would serve the through (and some local) trips.

It is recommended that some of these changes later be extended to other locations, if traffic along Florida develops as anticipated. In particular, eventually the east-west couplet of Acacia and Devonshire can be extended westerly to Sanderson Avenue and the intersection of Acacia with Florida, and eastward into the area currently within the jurisdiction of Riverside County.

This proposed one-way system is not without problems or conflicts. In particular, the proposed improvement of Devonshire would require regaining the right-of-way through Hemet Junior High School. A similar situation exists in regard to Santa Fe Avenue. The one-way proposal would also mean the need to realign Acacia Avenue at Palm, if Acacia is to be improved to Master Plan standards. Ultimately this location may warrant a grade separation.

Caltrans is also in the process of upgrading signal equipment and improving several intersections along Florida Avenue. The most important change is at the intersection of Florida Avenue and San Jacinto Street, the most congested intersection in Hemet. Improvements such as intersection widening, signal modification and geometric improvements will result in the ability to handle higher levels of traffic. Caltrans anticipates making continued additional improvements to the State Highway system in this area as they are warranted.

Since most serious congestion problems occur within the CBD, top priority should logically be given to improvements here. Better circulation within the business district and the provision of adequate parking for the important land uses here should continue to be a major planning concern for Hemet. The phased improvements and changes recommended within the CBD can be programmed into the fiscal plans of the city.

Recommendations for the Long Range Circulation System

Recommendations for a circulation system adequate for the long range requirements of Hemet are based on anticipated travel desire lines, as previously discussed. In the developed parts of the city, most recommendations for radical changes in the capacities of roads would be impractical (except for one-way street systems), since the cost is prohibitive. Here, the emphasis in handling anticipated demand surpluses must be in reworking the current system, such as removing on-street parking or providing one-way couplets in order to increase capacity.

In undeveloped and developing parts of Hemet, there is an opportunity to develop a circulation system largely adequate to serve the developing patterns of land uses. Where current plans call for high intensities, consideration should be given to a one mile spacing of major highways. Where low intensity developments are planned, the spacing of such highways should be greater and the secondary-collector system should be enlarged to provide for traffic flow and access. At the other extreme, the local circulation system should emphasize a non-grid pattern, and be designed so as to discourage unnecessary trips through residential areas.

In addition, limited access to major and secondary streets should be encouraged, where practical. Access control leads to a more organized pattern of traffic flows. It also provides for access at intervals which are established to reduce traffic conflict, facilitate circulation, enhance traffic signal control operation, and maintain

smooth flow between major intersections. From a traffic planning standpoint, controlled access should be encouraged. The intelligent and orderly application of such control goes hand in hand with planning for the land uses which abut the street. The movement of traffic through a hierarchy of local to neighborhood and then to higher level streets is a product of access control and good land use planning.

In general, it appears that Hemet has the opportunity to implement a master plan circulation system largely sufficient to meet the city's projected needs. In some areas, however, developments have already occurred (especially in the western part of the city) that have set precedents for not continuing the major circulation system specified in the Hemet-San Jacinto and Riverside County general plans. Current developments along parts of Lyon and Palm Avenues will preclude improving these roads to their ultimate widths, as shown in these plans. Similarly, developments south of Stetson Avenue have eliminated the option of extending Kirby Avenue south of Stetson (as on both master plans) and will require an alignment of Harrison Avenue (or perhaps a realignment of Simpson) more southerly than shown.

Except for Florida Avenue, State Street, San Jacinto Street and Stetson Avenue, most existing roadways within Hemet are of the two-lane rural type and not improved to their master plan standards. The eventual improvement of these roads to those standards will play a major part in allowing transportation to continue to function smoothly within the city. These improvements should be planned and phased in conjunction with development of adjoining land uses. It is also recommended that provisions be made to have the cost of a large part of the improvements borne by those developments that make them necessary. In this way, the residents of older residential, commercial, and industrial areas will not be forced to subsidize new developments.

Another high priority objective is to enforce a policy of maintaining the integrity of the adopted master plan of highways by securing the designated right-of-way when new developments are approved. Although construction to full roadway width may not be warranted for some time, it would be short-sighted (and expensive in the long run) to allow developments that preclude improvements to ultimately planned widths. In addition, access control, as outlined in an earlier section, should be maintained to assure smooth traffic flow and high roadway capacity and safety.

APPENDIX A

COUNTY/1968 HEMET-SAN JACINTO
MASTER PLANNED HIGHWAY DESIGNATION COMPARISON

<u>STREET NAME AND LOCATION</u>	<u>COUNTY DESIGNATION</u>	<u>CITY DESIGNATION</u>
1. Acacia Avenue Sanderson-San Jacinto	Not Shown	Secondary Highway
2. Buena Vista Florida-Menlo	Not Shown	Secondary Highway
3. Cawston Avenue Harrison-Stetson	Secondary Highway	Secondary Highway
4. Columbia Street Ramona Blvd-Florida Ave. Florida Ave.-Ramona Blvd.	Secondary Highway Secondary Highway	Secondary Highway Secondary Highway
5. Devonshire Ave. Sanderson-San Jacinto	Not Shown	Secondary Highway
6. El Fuego Rd. Olive-Stetson	Secondary Highway	Not Shown
7. Fisher St. Simpson-Stetson	Secondary Highway	Not Shown
8. Florida Ave. Sanderson-San Jacinto	Major Highway	Major Highway
9. Girard Rd. Ramona Bowl-Florida	Secondary Highway	Not Shown
10. Harrison Avenue Aqueduct-State	Secondary Highway	Secondary Highway Aqueduct to Lyon Not shown Lyon to State
11. Kirby St. Cottonwood-Stetson S/O Stetson	Secondary Highway Secondary Highway	Secondary Highway Not Shown
12. La Tierra Palm-San Jacinto	Secondary Highway	Not Shown
13. Latham Ave. State-San Jacinto	Not Shown	Secondary Highway
14. Lyon Ave. N/O Stetson S/O Stetson	Major Highway Secondary Highway	Major Highway Secondary Highway

<u>STREET NAME AND LOCATION</u>	<u>COUNTY DESIGNATION</u>	<u>CITY DESIGNATION</u>
15. Mayberry Ave. Lyon-San Jacinto	Collector Highway	Not Shown
16. Menlo Ave. Sanderson-San Jacinto	Secondary Highway	Major Highway
17. Oakland Ave. State-San Jacinto	Not Shown	Secondary Highway
18. Palm Stetson-DeAnza S/O Stetson	Secondary Highway Secondary Highway	Secondary Highway Not Shown
19. Sanderson Ave Entire length	Major Highway	Major Highway
20. San Jacinto Florida-Ramona Ex- pressway Stetson-Florida La Tiera-Stetson	Secondary Highway Secondary Highway Secondary Highway	Major Highway Secondary Highway Not Shown
21. State (Entire length)	Major Highway	Major Highway
22. Stetson Ave. Aqueduct-San Jacinto	Secondary Highway	Major Highway
23. Warren Rd. Simpson-Stetson	Secondary Highway	Secondary Highway
24. Whittier Ave. Lyon-San Jacinto	Secondary Highway	Secondary Highway from Palm to San Jacinto

APPENDIX B

CITY OF HEMET MASTER PLAN OF STREETS
APRIL 1980

Streets	Right of Way Width (feet)	Proposed Right of Way County General Plan
<u>NORTH AND SOUTH</u>		
Yale Street	66'	Not Shown
Girard Street (Florida to Stetson Prop.)	66'	88'
San Jacinto St., N/O Florida Ave. State Hwy. Currently	80'	88'
San Jacinto St. S/O Florida Ave.	66'	88'
Santa Fe Street	66'	Not Shown
Buena Vista Street	66'	Not Shown
State St. N/O Florida Ave.	88'	Variable (Specific)
State St. S/O Florida Ave.	88'	100'
Gilbert Street	66'	Not Shown
Palm Avenue	60'	88'
Lyon Ave. N/O Florida Ave.	88'	88'
Lyon Ave., between Florida Ave. & A.T.&S.F. tracks	66'	88'
Lyon Ave. between A.T.&S.F. railroad tracks & Stetson Ave.	60'	88'
Lyon Ave. S/O Stetson Ave.	88'	88'
Kirby Avenue	88'	88'
Sanderson Avenue	100' Variable	(Spec. Plan)
Cawston Avenue	88'	88'
Warren Road	88'	88'

Streets	Right of Way Width (feet)	Proposed Right of Way County General Plan
<u>EAST AND WEST</u>		
Eaton Avenue	88'	88'
Fruitvale Avenue	60'	Not Shown
Menlo Avenue (Myers on Proposed Also)	88'	88'
Oakland Avenue	60'	Not Shown
Devonshire Avenue	66'	88'
Latham Avenue	66'	Not Shown
Florida Ave. - State Hwy.	100'	100'
Acacia Avenue	66'	Not Shown
Mayberry Avenue	66'	Not Shown
Whittier Avenue	66'	88'
Johnston Avenue	66'	Not Shown
Stetson Avenue	88'	88'
Thornton Avenue	66'	Not Shown
Chambers Avenue	66'	Not Shown
Harrison Avenue	88'	88'

Note: Designations/Widths not adopted

APPENDIX C

Evaluation Criteria for Various Postions of the General Plan Street System

The City of Hemet has recommended and adopted numerous changes to the Hemet-San Jacinto General Plan of 1968. These modifications are essential to the integration of projected land uses and their resultant vehicular demand. Below various streets were analyzed to determine their relationship to the County's Road Plan, existing improvement conditions, level of traffic flow, and projected development. The result of this analysis is contained within Chapter III under Circulation System Recommendations.

Devonshire Avenue

This street within the Hemet City limits is not shown on the County Plan. Within Hemet the City calls for a 66' right-of-way. The County Plan shows an 88' secondary street from Sanderson Avenue west to Orchard Avenue. The City proposed General Plan shows Devonshire as a secondary from Sanderson to Park Avenue.

- ° Recommend Devonshire be considered as secondary highway, 88' right-of-way, from Orchard to Park Avenue/Cornell Street.

Whittier Avenue

City of Hemet master plan shows 66' right-of-way. Proposed City General Plan shows Whittier as an 88' secondary highway from Fairview to Sanderson. This is the same as County General Plan. The Southwest Area Specific Plan does not show Whittier as a secondary or major highway on the system.

The built up residential area between Lyon and San Jacinto realistically precludes providing an 88' right-of-way without adverse effects on the properties.

- ° Recommend Whittier Avenue be considered as a collector street with a 66' right-of-way from Lyon Avenue to San Jacinto Street. From San Jacinto Street easterly a secondary highway section with an 88' right-of-way to match the County plan is recommended.

The 66' section in the future may not be able to handle the projected traffic volumes. As such the prohibition of curb parking would be a necessity to ensure safe and reasonably smooth traffic flow.

Whittier Avenue is discontinuous west of Lyon Avenue. However, the County Plan shows Whittier Avenue as a secondary highway linking Cawston Road south of Acacia with Warren Road.

Whittier Avenue should be a local street, with a 66' right-of-way from Warren Road to Cawston Road. The Cawston/Whittier intersection would be south of Acacia Avenue.

Girard Street

In the southeast portion of the Hemet area, this street would parallel San Jacinto Street. It should remain on the County Plan as an 88' right-of-way secondary. This should be upgraded in the City of Hemet Street Master Plan from its 66' right-of-way status. It is not presently shown on the proposed Hemet Circulation Element of the General Plan.

- ° Recommend Girard be considered as an 88' right-of-way secondary street from Florida to Stetson Avenues.

Palm Avenue

Hemet Master Plan, April, 1980 shows 60' right-of-way while County Plan proposes 88' right-of-way secondary street. Hemet General Plan Circulation Element shows Palm as a secondary highway from north City limits to south City limits.

The section between Menlo and Stetson Avenues is almost completely built to a 60 foot right-of-way width situation. An additional right-of-way consideration of 28' (to provide 88') would force a total change in character of the abutting lots and elements of many of the existing home-owners.

- ° Recommend a 60' right-of-way be retained on Palm Avenue between Menlo Avenue and Stetson Avenue. North of Menlo Avenue and South of Stetson Avenue has less existing development and therefore a greater opportunity to provide additional right-of-way exists. Recommend secondary highway status for these sections with an 88' right-of-way.

Lyon Avenue

There are distinct sections on this north/south route. They are north of Florida Avenue, between Florida and the A.T. & S.F. railroad, from the railroad to Stetson Avenue, and from Stetson Avenue south. Table 6 shows the considerations on this route.

TABLE 6

LYON AVENUE ROADWAY DESIGNATIONS

Segment	Riverside County Proposed Designation	City of Hemet Master Plan Designation	City of Hemet Proposed General Plan
Florida Ave. No.	Secondary Hwy. 88' R/W	Secondary 88' R/W	Secondary 88'R/W
Florida Ave. to AT&SF Railroad	Secondary Hwy. 88' R/W	Collector 66' R/W	Collector 66' R/W
AT&SF R.R. to Stetson	Secondary Hwy. 88' R/W	Collector 60' R/W	Collector 66' R/S
Stetson Ave. So. to Harrison	Secondary Hwy. 88' R/W	Secondary 88' R/W	Secondary 88' R/W
Harrison Ave. So.	Secondary Hwy. 88' R/W	Secondary 88' R/W	Major Highway- 100' R/W

The developments planned in the southwest area will generate traffic volumes between 20,000 and 26,000 vpd on Lyon Avenue ¹. The volume levels can be accommodated by a secondary highway, but are very close to major highway considerations. Lyon and Sanderson Avenue will be the two major north/south routes serving the southwest area. Thus it is important to provide a facility to accommodate the future development.

The Salt Creek Channel passes through the southwest area and would cross Lyon Avenue. A major all-weather bridge crossing would be necessary. This has not been taken into account in the Riverside County Plan.

ASL does not believe that the secondary highway category will be able to handle the projected southwest area volumes in the year 2000. It's realized that the major highway category will require a wider bridge across the Salt Creek Channel at Lyon which will increase the expense considerably. However, future planning needs and projected volumes could necessitate the added width.

The bridge could be constructed for two way traffic with two lanes plus accommodations for pedestrian accommodations could be implemented.

1. BDI Report on Seven Hills planned community with Harrison

In view of the fact that Kirby Avenue will not be a continuous north/south street to relieve Lyon traffic, Sanderson Avenue will have to accommodate in excess of 40,000 vpd., thus adding to the need for adequate roadway width on Lyon. Future traffic volume levels should be monitored as development and the street system implementation progresses to determine the need for a major highway section on Lyon. An extension of Harrison to State Street would attract some of the north/south Lyon traffic onto State Street which would reduce the need for a major highway section on Lyon.

In the northern part of the Lyon Avenue section, this route serves as an alternative to State Street. It is close to the State highway and equally spaced between State and Sanderson Avenue. We believe a secondary highway will serve the City well in the future.

In the southern section, Lyon Avenue is the first north/south street available to the entire western portion of the area. It is the first opportunity to proceed south from Hemet on any street other than State Street. The mountainous topography of the Seven Hills area contributes to this situation. Thus, Lyon should be a major highway in this section.

- ° Recommend Lyon Avenue be designated a secondary highway 88' right-of-way on the County Plan between the Ramona Expressway and Acacia Avenue.
- ° Recommend the City General Plan continue to show Lyon Avenue as a collector street between Acacia and Stetson with the exception that between Florida Avenue and Acacia Avenue an 88' right-of-way be provided. This would allow for adequate intersection improvements to handle future demand.
- ° Recommend a secondary highway, 88' right-of-way, from Stetson Avenue south to Harrison Avenue. South of Harrison Avenue the street should continue as a secondary highway, 88' right-of-way status since it is the main gateway to future large residential developments.
- ° Recommend the County Plan show a major all weather bridge crossing of Lyon Avenue and Salt Creek Channel.

State Street

This State highway is designated as a specific plan road on the County Plan. The City Master Plan shows this route as a secondary route with an 88' right-of-way. A specific plan study would decide if this is adequate.

- ° Recommend no change to the State Street classification on the County Plan.

San Jacinto Street

State Highway 79 is shown on the County Plan as a secondary highway. The City Master Plan has proposed 80 and 66 feet of right-of-way north and south of Florida Avenue respectively. The City General Plan recommends San Jacinto be a major highway north of Whittier and a secondary to the south. There is not another continuous north/south high traffic carrying facility east of State Street except San Jacinto. This is also the easternmost boundary of the CBD.

- ° Concur with the need for this route to be a high level traffic carrying facility. It is another link to the Ramona Expressway and the City of San Jacinto. Recommend the County Highway Plan continue its secondary designation from Ramona Expressway to Stetson Avenue.

Stetson Avenue

The Southwest Area Plan shows projected traffic volumes between 31,000 to 37,000 vpd in sections east of Sanderson. This route recently has been developed to an 88' right-of-way section between Sanderson and Lyon. Additional widening does not appear necessary for the short range projected volume levels. The 37,000 vpd could be accommodated within this section. Harrison Avenue to the south will be a parallel link that can accommodate east/west travel through the southwestern part of the City.

- ° Recommend the 88' right-of-way secondary highway be retained from west of Warren Road to San Jacinto Street and that major arterial status be designated east of San Jacinto.

Sanderson Avenue

The County Plan shows this as a specific plan road while the City's Southwest Area Plan designates it as a major or arterial roadway. The proposed Aqueduct Road west of the Warren Road alignment would be a freeway type facility that could relieve Sanderson Avenue.

This should be specifically planned with potential for either a major or arterial route if the Aqueduct Road is not a realistic occurrence. Assuming the Aqueduct Road is viable, then Sanderson could operate as a secondary highway.

The County Plan does not show the need for major bridge crossings of the Salt Creek Channel near Harrison Avenue and Warren Road. This essentially is to serve the proposed development south of the creek.

- ° Recommend Sanderson be designated as a major highway on the City General Plan.
- ° Recommend the County Plan designate a major all-weather bridge crossing across the Salt Creek Channel near Harrison Avenue.
- ° Recommend the County Plan designate a bridge crossing of the Salt Creek Channel at Simpson Road (Sanderson extended) near Warren Road (See Street Classification Map).

Harrison Avenue

The Southwest Plan shows volume levels in excess of 19,000 vpd for the Alternate 6 land use plan¹. The Seven Hills master plan study done in 1981 by BDI² shows Harrison Avenue projected volumes in excess of 30,000 vpd west of Sanderson.

There has been an alignment change for Harrison Avenue after extensive study by the City of Hemet. The City Council approved the alignment change from the Master Plan of Highways as shown in Figure 4. Harrison Avenue would now extend from Warren Road to Sanderson Avenue north of Salt Creek. East of Sanderson, Harrison would extend south of the Salt Creek Channel to State Street.

1. April 1979 data from Southwest Plan, p. 314

2. Seven Hills Community Plan Analysis, BDI, June 1981

- ° Recommend Harrison Avenue remain as a secondary highway from the Aqueduct Road to State Street.
- ° The extension of Harrison Avenue east of Lyon Avenue (renamed Simpson Avenue) will require a major drainage structure crossing¹ would be necessary in this area across Palm Avenue and State Street where Pepper Creek Wash meanders slightly northeastward from the junction of Cactus Valley and Salt Creek Channel.

Fisher Street

A secondary street that links Harrison and Stetson with a projected volume of 12,000 vpd. As previously discussed, Stetson Avenue is planned for realignment at the AT & SF railroad tracks near Fisher Street. The section of Fisher Street between Stetson Avenue and Stetson Avenue "realigned" can be designed to meet both roads at a conventional intersection rather than a severely skewed crossing of the railroad if Fisher were placed further east.

The alignment of Sanderson/Simpson coupled with Warren Road's extension to Simpson eliminates the need for Fisher Street to be extended south of Harrison Street.

- ° Recommend Fisher Street be designated as a 66' right-of-way local street between Stetson Avenue and Stetson Avenue realigned.
- ° Recommend Fisher remain as a secondary highway, 88' right-of-way between Stetson Avenue realigned and Harrison Avenue. Fisher is not anticipated to cross the AT & SF railroad to the north nor is it needed south of Harrison Avenue.

Cawston Avenue

Cawston Avenue has been deleted from the County Highway Plan between Stetson and Harrison, which upon further analysis, is appropriate.

1. Major drainage structures connote box culverts, pipe culverts, etc. rather than bridge structures.

In the area north and immediately south of Florida Avenue there is an opportunity to provide future alignments that would eliminate present intersection and roadway problems.

Whittier Avenue has been recommended to extend from Warren to Cawston Avenue - extended south of Florida Avenue. By extending Cawston Avenue to Acacia and beyond Florida Avenue, there is the opportunity to eliminate the present problem intersection of Florida/Acacia. The new Cawston/Florida intersection could be a right angle configuration and would allow the parcel to the west to be fully utilized.

- ° Recommend Cawston Avenue be a secondary highway, 88' right-of-way from Whittier Avenue extended to north of Florida Avenue into the County area. Acacia Avenue would be removed from master plan consideration west of Cawston and cul-de-saced at Florida Avenue.

The general recommendations to the County Highway Plan Street System as they relate to Hemet are summarized below:

- ° The City of Hemet street classifications are the same as shown on the proposed County of Riverside General Plan.

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APPENDIX D
TRAFFIC FLOW DATA

STREET/LOCATION	DATE/DAY	DIR	24-HOUR	AM PEAK HOUR		PM PEAK HOUR	
				HR. BEG.	VOL.	HR. BEG.	VOL.
Acacia at Lyon	11/10/78	EB	1772	11:15	201	3:00	229
		WB	1391	11:30	168	3:15	164
		TOT	3163	11:15	362	3:00	381
Acacia E/o Sanderson	9/06/77	EB	720	10:45	72	4:00	65
		WB	888	10:45	85	4:00	88
		TOT	1608	10:45	157	4:00	153
Acacia E/o San Jacinto	10/03/78 10/04/78	EB	2209	11:00	193	4:30	229
		WB	2480	10:45	240	2:30	208
		TOT	4689	11:00	428	12:00	414
Acacia E/o Santa Fe	10/03/78 10/04/78	EB	2409	9:45	198	4:15	286
		WB	2877	10:45	258	2:30	296
		TOT	5286	8:15	447	2:30	533
Acacia W/o Santa Fe	10/03/78 10/04/78	EB	2347	11:00	207	4:45	282
		WB	2298	10:45	248	2:15	244
		TOT	4645	11:00	499	2:00	504
Acacia E/o State	10/04/78 10/05/78	EB	2650	4:30	300	3:45	268
		WB	2630	11:00	273	3:15	255
		TOT	5280	10:30	545	3:45	506
Acacia W/o State	10/04/78 10/05/78	EB	1585	10:30	162	3:45	158
		WB	1541	11:00	139	3:30	161
		TOT	3126	10:30	294	3:30	314
Buena Vista S/o Acacia	10/12/78 10/13/78	NB	1756	8:15	172	12:45	162
		WB	1522	10:00	112	4:30	172
		TOT	3278	10:00	243	4:45	288
Buena Vista N/o Florida	10/04/78 10/05/78	NB	2214	10:00	204	2:30	242
		SB	2091	11:00	194	4:00	202
		TOT	4305	10:45	385	2:00	420
Buena Vista S/o Florida	11/03/78	NB	2811	11:00	259	1:00	270
		SB	1978	11:00	174	1:00	200
		TOT	4785	11:00	433	1:00	470
Buena Vista Approach to Stetson	11/17/78	NB	577	11:00	54	12:30	49
		SB	1171	8:15	75	2:30	124
		TOT	1748	8:15	119	2:30	177
Devonshire at Gilbert	2/20/79	EB	1193	10:00	107	1:45	140
		WB	925	11:15	88	3:15	117
		TOT	2118	10:45	187	3:15	239
Devonshire at Lyon	11/03/78	EB	1404	10:00	147	1:45	140
		WB	1316	9:45	114	2:30	145
		TOT	2720	10:00	261	1:45	255
Devonshire E/o San Jacinto	11/02/78	WB	1683	11:00	131	3:15	153
Devonshire W/o San Jacinto	8/17/78	EB	816	11:00	63	3:00	114
		WB	651	7:15	52	2:30	64
		TOT	1467	9:15	109	2:45	169
Devonshire at State	10/12/78 10/13/78	EB	2261	9:45	189	1:45	214
		WB	1140	10:30	108	2:30	124
		TOT	3401	10:15	287	1:45	312
Florida E/o Acacia	9/06/78	EB	7278	10:00	672	4:00	558
		WB	7086	9:45	581	4:00	598
		TOT	14,364	10:00	1252	4:00	1156
Florida W/o Girard	10/13/78	EB	12,572	11:00	914	4:45	986
		WB	13,367	11:00	994	1:45 & 12:00	963
		TOT	25,939	11:00	1908	12:00	1929

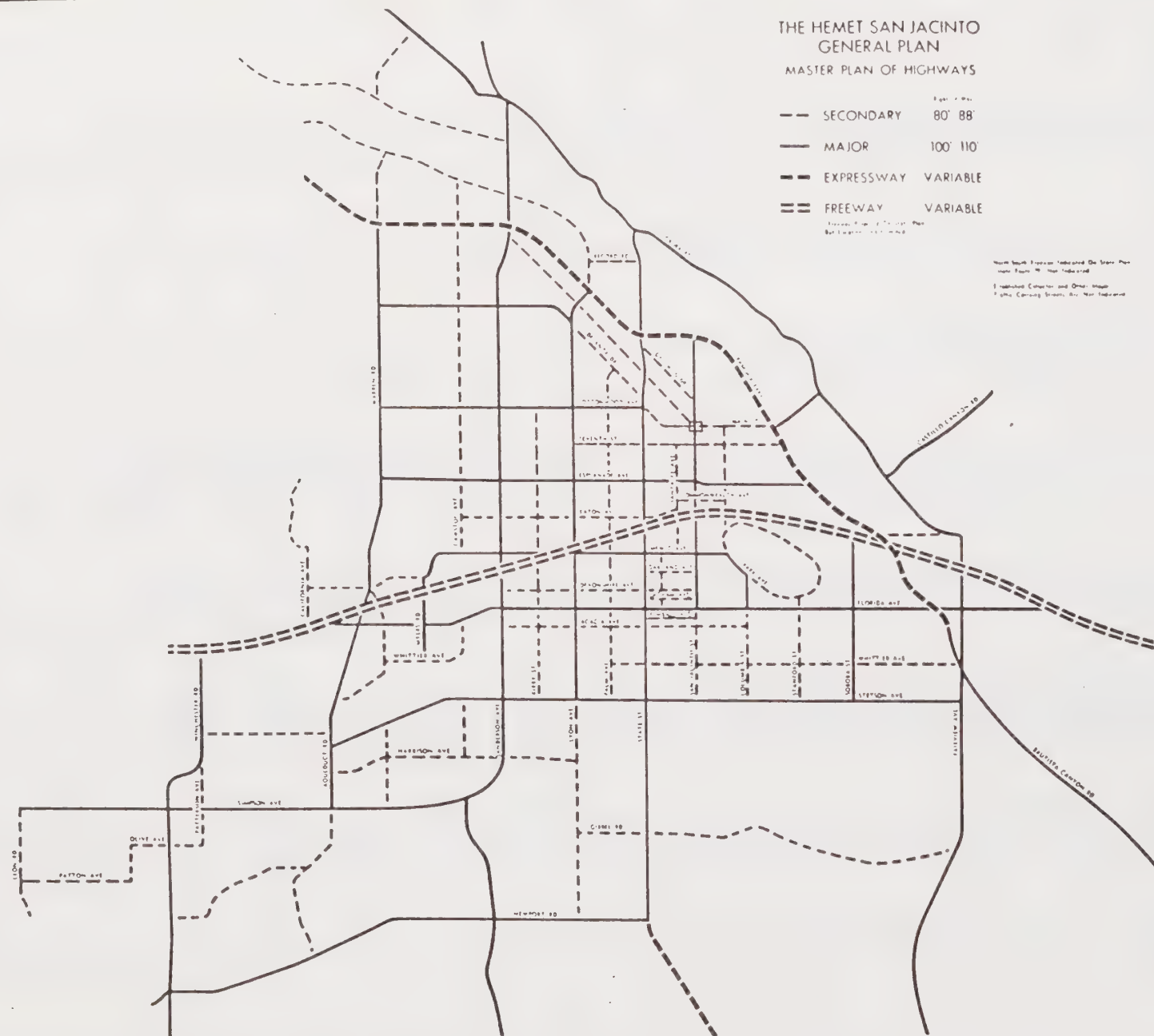
Source: Car Counter Co., Playa del Rey, Calif., 1978

STREET/LOCATION	DATE/DAY	DIR	24-HOUR	AM PEAK HOUR		PM PEAK HOUR	
				HR. BEG.	VOL.	HR. BEG.	VOL.
Florida W/o Juanita	8/09/78	EB	8,977	10:00	727	12:00	73
		WB	10,668	11:00	827	12:00	843
		TOT	19,645	10:30 & 11:00	1531	12:00	1577
Florida N/o Juanita	8/10/78	EB	8,845	11:00	725	12:00	730
		WB	10,693	11:00	819	12:00	871
		TOT	19,538	11:00	1544	12:00	1601
Florida E/o Kirby	8/08/78 8/09/78	EB	8,312	9:45	720	12:15	651
		WB	6,785	9:45	511	4:30	586
		TOT	15,097	9:45	1231	4:30	1152
Florida W/o Lyon	8/08/78 8/09/78	EB	8,478	9:45	725	12:45	689
		WB	8,913	9:45	725	12:00	727
		TOT	17,391	9:45	1450	12:00	1400
Florida W/o San Jacinto	8/10/78	EB	10,955	11:00	877	12:00	917
		WB	11,388	11:00	816	12:30	955
		TOT	22,343	11:00	1693	12:00	1807
Florida W/o Santa Fe	8/10/78	EB	10,445	11:00	863	12:00	901
		WB	11,619	11:00	890	12:45	918
		TOT	22,064	11:00	1753	12:00	1766
Florida W/o State	8/10/78	EB	10,046	9:45	844	12:45	829
		WB	9,891	11:00	803	12:30	794
		TOT	19,937	11:00	1603	12:45	1619
Florida W/o State	8/09/78	EB	10,164	9:45	849	12:30	805
		WB	10,140	11:00	775	12:00	802
		TOT	20,304	9:45	1605	12:00	1602
Gilbert at Devonshire	2/20/79	NB	428	11:30	48	4:45	53
		SB	327	11:45	45	2:15	3
		TOT	755	11:30	91	12:00	7
Gilbert S/o Florida	2/21/79	NB	829	11:45	77	12:15	74
		SB	813	11:45	83	12:00	75
		TOT	1,642	11:45	160	12:00	147
Gilbert at Latham	2/20/79	NB	617	9:30	64	2:30	76
		SB	558	11:45	62	3:00	71
		TOT	1,175	11:15	111	3:00	140
Girard S/o Florida	2/22/79	NB	2,886	10:45	241	2:30	285
		SB	2,219	11:45	247	2:15	247
		TOT	5,105	11:15	457	2:30	508
Girard S/o Johnston	2/22/79	NB	1,036	11:15	88	3:45	104
		SB	1,063	11:45	100	2:45	105
		TOT	2,099	11:45	179	3:45	199
Harrison E/o Warren	3/22/78	TOT	67	10:00	14	3:00	9
Harvard S/o Florida	2/21/79	NB	1,130	10:45	113	2:00	127
		SB	725	10:00	99	12:00	85
		TOT	1,855	10:00	204	12:00	205
Harvard at Latham	10/11/78 10/12/78	NB	3,741	10:00	459	12:45	448
		SB	267	10:30	43	1:30	33
		TOT	4,008	10:00 & 10:15	494	12:45	465
Johnston E/o Palm	11/03/78	EB	462	11:00	52	4:00	52
		WB	524	11:00	36	1:00	64
		TOT	986	11:00	88	4:00	108

STREET/LOCATION	DATE/DAY	DIR	24-HOUR	AM PEAK HOUR		PM PEAK HOUR	
				HR. BEG.	VOL.	HR. BEG.	VOL.
Johnston Approach to Santa Fe	11/17/78	EB	618	10:00	49	2:15	60
		WB	498	7:30	43	4:00	50
		TOT	1,116	10:00	80	4:45	108
Kirby N/o Florida	8/08/78	NB	1,193	11:00	88	12:15	115
	8/09/78	SB	1,255	10:00	96	12:00	116
		TOT	2,448	11:00	183	12:00	226
Kirby S/o Florida	8/08/78	TOT	186	10:45	75	1:45	111
	8/09/78						
Latham at Gilbert	2/20/79	EB	759	7:30	52	3:30	180
		WB	2,780	11:15	274	3:00	315
		TOT	3,539	11:15	286	3:00	487
Latham at Harvard	10/11/78	EB	4,247	8:45 & 10:15	448	1:45	397
	10/12/78	WB	3,117	11:00	320	2:30	338
		TOT	7,364	10:45	729	2:00	684
Latham at Lyon	11/03/78	EB	1,162	11:15	143	3:30	139
		WB	1,267	11:15	145	12:00	139
		TOT	2,429	11:15	288	3:45	271
Latham at Palm	2/20/79	EB	1,081	11:45	103	12:00	109
		WB	1,563	11:00	168	2:45	201
		TOT	2,644	11:00	252	2:15	264
Latham W/o San Jacinto	10/04/78	EB	3,955	10:15	400	3:30	400
	10/05/78	WB	2,920	10:45	274	1:45	313
		TOT	6,875	10:45	669	1:45	696
Latham at Santa Fe	11/03/78	EB	4,441	9:45	404	1:45	497
		WB	3,072	10:45	293	2:00	354
		TOT	7,513	10:30	682	2:00	825
Latham at State	10/11/78	EB	1,999	10:45	182	3:30	175
	10/12/78	WB	3,187	10:45	284	12:00	320
		TOT	5,186	10:45	466	12:00	486
Lyon at Acacia	11/10/78	NB	3,129	11:45	303	12:00	314
		SB	3,072	11:30	324	3:45	335
		TOT	6,201	11:30	625	3:15	650
Lyon at Devonshire	11/03/78	NB	2,884	11:30	281	3:15	285
		SB	2,014	11:15	186	3:00	193
		TOT	4,898	11:30	458	3:15	473
Lyon N/o Florida	8/10/78	NB	6,993	10:00	622	3:30	622
Lyon at Latham	11/03/78	NB	3,497	11:00	348	2:45	347
		SB	2,823	11:00	268	2:45	295
		TOT	6,320	11:00	616	2:45	642
Lyon at Stetson	11/16/78	NB	760	9:00	100	4:15	94
	11/17/78	SB	1,522	11:00	147	12:00	158
		TOT	2,282	9:15	232	4:00	235
Mayberry E/o Lyon	2/21/79	EB	496	11:15	61	4:00	62
		WB	542	10:00	68	3:15	59
		TOT	1,038	10:00	120	4:00	108
Mayberry E/o State	2/21/79	EB	739	11:15	82	3:45	83
		WB	738	7:45	64	3:15	84
		TOT	1,477	11:15	134	2:30	148
Oakland W/o San Jacinto	2/22/79	EB	2,206	11:30	216	4:15	246
		WB	3,612	11:45	313	1:45	346
		TOT	5,818	11:30	527	1:45	574
Oakland at State	11/03/78	EB	319	10:00	37	12:00	34
		WB	1,298	10:00	127	3:45	148
		TOT	1,617	10:00	164	3:00	170

STREET/LOCATION	DATE/DAY	DIR	24-HOUR	AM PEAK HOUR		PM PEAK HOUR	
				HR. BEG.	VOL.	HR. BEG.	VOL.
Palm S/o Florida	2/21/79	NB	1,960	10:15	245	1:15	208
		SB	2,173	10:00	237	2:30	189
		TOT	4,133	10:15	475	2:00	378
Palm S/o Johnston	11/03/78	NB	1,274	9:00	110	3:00	123
		SB	1,124	9:45	98	3:30	137
		TOT	2,398	9:45	210	3:15	255
Palm at Latham	2/20/79	NB	1,378	11:45	125	3:45	148
		SB	1,179	11:15	112	2:45	105
		TOT	2,557	11:45	232	3:45	245
Sanderson S/o Acacia	9/06/77	NB	1,843	7:00	178	2:45	185
		SB	2,182	10:30	232	2:00	192
		TOT	4,025	10:45	394	2:45	372
San Jacinto S/o Acacia	10/03/78	NB	2,518	7:45	270	2:30	221
	10/04/78	SB	2,456	10:45	179	2:45	254
		TOT	4,974	7:45	381	2:45	466
San Jacinto N/o Devonshire	8/17/78	NB	7,298	11:00	565	12:00	600
		SB	6,789	11:00	553	12:45	561
		TOT	14,087	11:00	1118	12:45	1148
San Jacinto S/o Devonshire	8/17/78	NB	8,247	10:30	679	12:00	716
		SB	7,306	11:00	602	12:45	608
		TOT	15,553	11:00	1241	12:00	1300
San Jacinto N/o Florida	8/10/78	NB	7,277	9:30	580	12:45	605
		SB	7,231	11:00	571	12:00	613
		TOT	14,508	11:00	1123	12:00	1160
San Jacinto S/o Florida	8/10/78	NB	3,680	10:00	315	12:15	321
		SB	3,158	11:00	252	12:00	278
		TOT	6,838	10:30	547	12:00	595
Santa Fe W/o Acacia	10/03/78	NB	2,375	7:45	289	2:00	239
	10/04/78	SB	2,301	11:00	207	4:15	253
		TOT	4,676	11:00	390	2:00	464
Santa Fe S/o Acacia	10/04/78	NB	2,210	7:30	230	1:45	212
	10/05/78	SB	2,304	11:00	173	4:15	324
		TOT	4,514	7:45	334	4:15	464
Santa Fe at Latham	11/02/78	NB	1,479	10:45	144	1:30	167
	11/03/78	SB	1,585	7:00	148	2:00	254
		TOT	3,064	7:15	297	2:00	400
Santa Fe Approach to Johnston	11/17/78	NB	1,184	7:45	105	4:15	99
		SB	1,393	10:45	90	4:45	137
		TOT	2,574	7:45	192	4:45	231
Seven Hills Approach to Stetson	11/17/78	NB	824	9:30	85	2:45	103
State N/o Acacia	10/04/78	NB	3,206	9:45	328	2:00	266
	10/05/78	SB	4,485	10:15	458	4:15	458
		TOT	7,691	10:00	764	4:00	688
State S/o Acacia	10/04/78	NB	4,805	10:00	488	4:15	414
	10/05/78	SB	4,306	10:45	414	4:15	408
		TOT	9,111	10:15	879	4:15	822
State at Devonshire	10/12/78	NB	4,273	11:00	412	12:30	491
	10/13/78	SB	6,680	10:30	574	3:15	630
		TOT	10,953	10:45	957	2:45	1079

STREET/LOCATION	DATE/DAY	DIR	24-HOUR	AM PEAK HOUR		PM PEAK HOUR	
				HR.	BEG. VOL.	HR.	BEG. VOL.
State at Latham	10/11/78	NB	5,130	11:00	396	12:45	454
	10/12/78	SB	6,243	10:30	555	3:15	581
		TOT	11,373	10:30	927	2:45	1017
State S/o Oakland	11/03/78	NB	5,836	11:00	984	3:00	1074
		SB	5,934	11:00	494	3:00	569
		TOT	11,770	11:00	984	3:00	1074
Stetson Approach to Buena Vista	11/17/78	EB	5,485	10:45	411	3:45	647
		WB	6,112	7:15	432	2:15	544
		TOT	11,597	10:45	822	3:30	1134
Stetson at Lyon	11/16/78	EB	3,028	11:00	264	3:30	341
		WB	4,225	11:00	396	12:15	390
		TOT	7,253	11:00	660	3:30	694
Stetson E/o Sanderson	3/22/78	EB	2,400	11:00	197	4:00	266
		WB	2,777	11:00	228	3:00	232
		TOT	5,177				
Stetson W/o Sanderson	9/06/77	EB	1,603	11:00	118	3:15	161
		WB	1,588	7:00	129	3:15	123
		TOT	3,191	11:00	338	3:15	284
Stetson Approach to Seven Hills	11/17/78	EB	2,999	11:00	213	4:30	335
		WB				3:00	300
		TOT				3:00	567
Warren N/o Stetson	3/22/78	NB	1,432	7:00	132	3:00	108
		SB	680	7:15	56	4:45	62
		TOT	2,112				
Warren S/o Stetson	3/22/78	NB	1,128	11:00	88	4:00	133
		SB	1,073	11:00	91	3:00	99
		TOT	2,201				
Whittier E/o Lyon	2/21/79	EB	628	11:00	79	12:15	66
		WB	525	11:00	61	1:00	50
		TOT	1,153	11:00	140	12:15	112
Whittier E/o State	2/21/79	EB	1,009	11:30	114	2:30	110
		WB	928	8:00	112	2:30	132
		TOT	1,937	8:15	207	2:30	242
Yale S/o Florida	2/22/79	NB	4,338	11:30	382	12:15	407
		SB	3,167	11:45	278	3:15	337
		TOT	7,505	11:30	656	3:15	709
Yale S/o Johnston	2/22/79	NB	1,175	9:30	108	4:30	110
		SB	1,258	11:45	110	5:00	127
		TOT	2,433	11:45	201	4:15	228

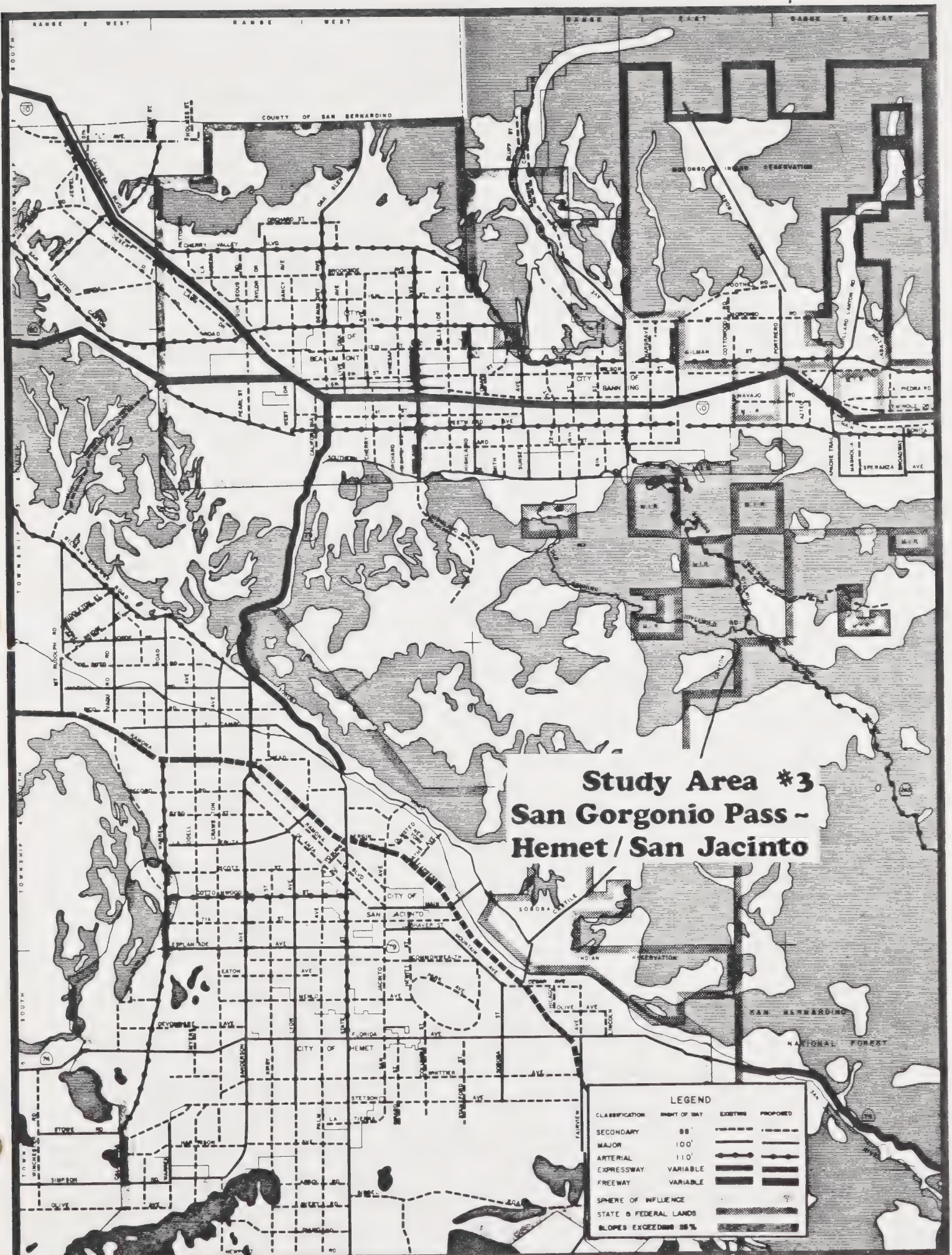


Source:

1968 Hemet-San Jacinto General Plan

Title:

Master Plan of Highways - 1968
Hemet-San Jacinto General Plan



Source: Riverside County Highway Plan, Draft Report, Dec., 1980

NOISE ELEMENT
CITY OF HEMET

ADOPTED - June 22, 1982

REVISED - July 26, 1984 - RESOLUTION NO. 2205

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I

I N T R O D U C T I O N

INTRODUCTION

Purpose

Awareness of noise has become a key feature in the perception of the quality of our environment. Noise, commonly defined as "unwanted sound" affects our daily lives. For this reason, noise has become an important aspect in the community planning process*.

The need for increased attention to noise in the City's planning process is a result of (1) continuing growth within the City of Hemet resulting in an increase of noise exposure to local residents from the various noise-producing components, such as vehicle traffic and aircraft, and (2) the heightened awareness of the impact of noise on human health and amenity.

The purpose of the noise element is therefore, to determine the current and future extent of noise exposure within the City of Hemet, to develop a statement of public policy to deal with problems of excessive noise, and to identify potential methods of noise abatement.

Legislative Requirement

The Noise Element is one of nine elements required by California law to be part of cities' and counties' general plan. Section 65302 (g) of the Government Code states that the General Plan shall include:

"A noise element which shall recognize guidelines adopted by the Office of Noise Control pursuant to Section 39850.1 of the Health and Safety Code, and which quantifies the community noise environment. Such noise exposure information shall become a guideline for use in development of the land use element to achieve noise compatible land uses and also to provide baseline levels and noise source identification for local policy."

The source of environmental noise considered in the Hemet noise element shall include, not is not limited to, the following:

- (1) General aviation, fire bomber, and glider aircraft operations

* Reference to the properties of noise and the effects of noise on people is contained in Appendices A and B.

- (2) Local highway traffic
- (3) Local railroad operations
- (4) Agricultural operations
- (5) Emergency vehicles
- (6) Domestic activities
- (7) Industrial and commercial uses

To define current and future noise exposure levels, noise contours for the primary noise producing sources within the City, such as vehicle traffic and aircraft operations, will be quantified in terms of day-night (L_{dn}) noise level contours. This methodology is defined in the glossary.

In addition to the quantification of noise exposure levels, the noise element will contain alternative noise mitigation measures.

Relationship to Other General Plan Elements

To some degree, all elements of the general plan are related and interdependent. The noise element is most closely related to the land use, circulation, and housing elements.

Land Use. A primary objective of the noise element is to provide noise exposure information for use in the land use element. The noise element will identify noise-sensitive land uses and suggest standards for their development in high noise impact areas.

Circulation. Transportation systems are dominant sources of noise in Hemet. Their location, capacity, and design determine the extent of noise impacts on surrounding land uses. The noise element affects the circulation element by suggesting that noise evaluation be included in the analysis of location and design alternatives for new roadways.

Housing. The housing element is concerned with the provision of adequate housing of acceptable quality, and noise exposure is an important factor affecting the quality of housing. The noise element recommends design standards for new housing in high noise impact areas. This will affect the cost and, in some instances, the location of new or rehabilitated housing.

Relationship to the Hemet/Ryan Airport Land Use Plan

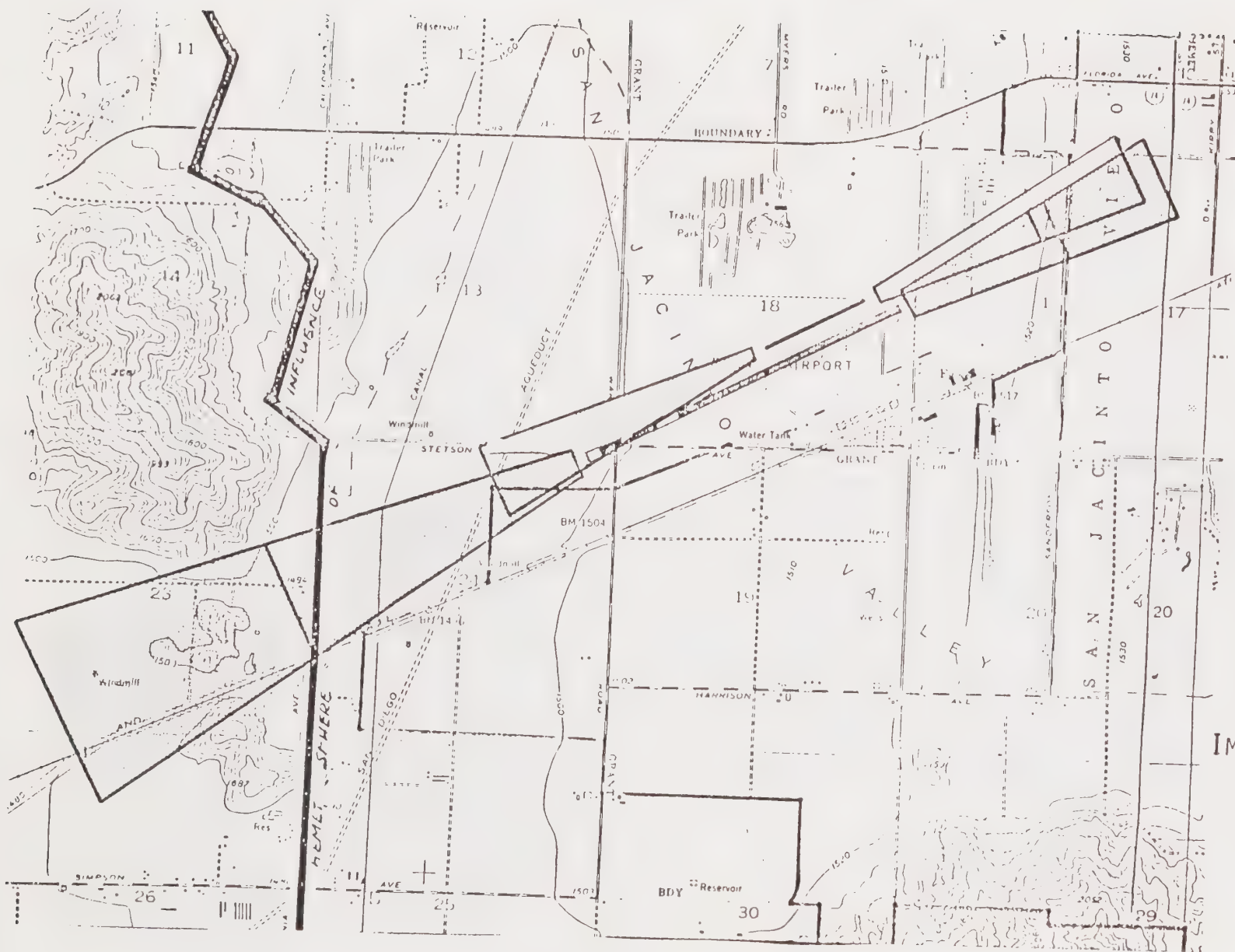
The Hemet/Ryan Land Use Plan, otherwise known as the Hemet/Ryan Airport Position Paper was adopted by the City in July 1983. The purpose of the plan was to define appropriate land uses in order to protect the health, safety, and welfare of potential users of land within the Airport influence area. Policies within the document identify potential hazards and high noise areas caused by aircraft and specify various land use controls that would minimize the impact upon the public health, safety, and welfare.

The Airport Land Use Plan designates three influence areas, as shown on Figures 1, 2, and 3 pages 4, 5 and 6. The areas were defined through the use of FAA Approach zones, existing flight patterns and noise contours. Influence Area I includes the high risk area near the Airport for landings and take-offs (Figure 1). Influence Area II includes the area of greatest impact which is affected by aircraft turning and applying or reducing power prior to entering the Approach Zone (Figure II). Influence Area III includes the area in which aircraft may affect property owners due to noise, glare or vibration (Figure III). The following policies apply to the Airport area:

- Policy 1: Area I shall be kept free of all high risk land uses. (See Figure 1). Residential development (2-1/2 acre lot size and larger) will only be permitted within the western 5,000 feet of the western approach zone.
- Policy 2: Area II shall have a minimum residential lot size of 2-1/2 acres. (See Figure 2) Commercial, industrial and agricultural land uses are acceptable in this area.
- Policy 3: In Area III, aviation easements will be required for all land uses. (See Figure 3) The height of the aviation easements will be from runway ground elevation within 5,000 feet of the runway in the approach zones and from 150 feet above runway ground level elevation throughout the remainder of Area III.
- Policy 4: New housing to be constructed in the 1986 55 LdN contour, as described by the UltraSystems Study dated 1978, shall be sound-proofed as necessary to achieve 45 LdN interior sound levels or quieter.

Policy 5: A new noise study is not necessary at this time. The Riverside County Airports Director should control the flight operations and facilities at Hemet-Ryan Airport so as not to increase the noise contours included in this plan. Temporary changes in flight operations may be made during the fire season and in the event of emergencies.

Policy 6: Before any major airport change is planned, involving land use, noise sources or policy changes, a Committee made up of representatives from the City of Hemet, County of Riverside, and Airport Land Use Commission (the Airport Subcommittee) shall be formed to evaluate these changes and forward their recommendations to the Hemet City Council, Riverside County Board of Supervisors and the Riverside County Airport Land Use Commission.

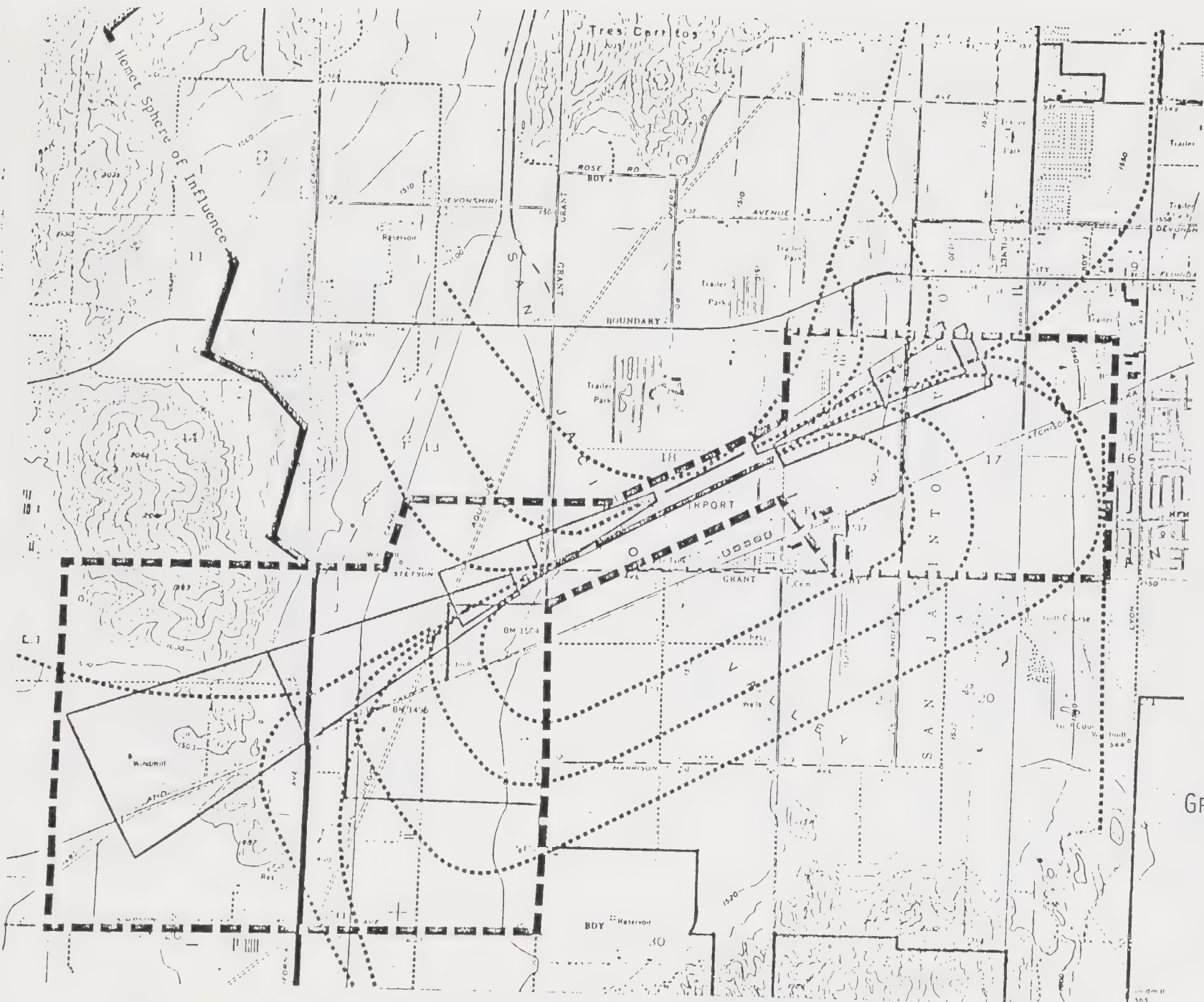


NORTH
NO SCALE

FIGURE 1

EXHIBIT I
IMAGINARY APPROACH SURFACES
(AREA I)

LEGEND



NORTH
NO SCALE

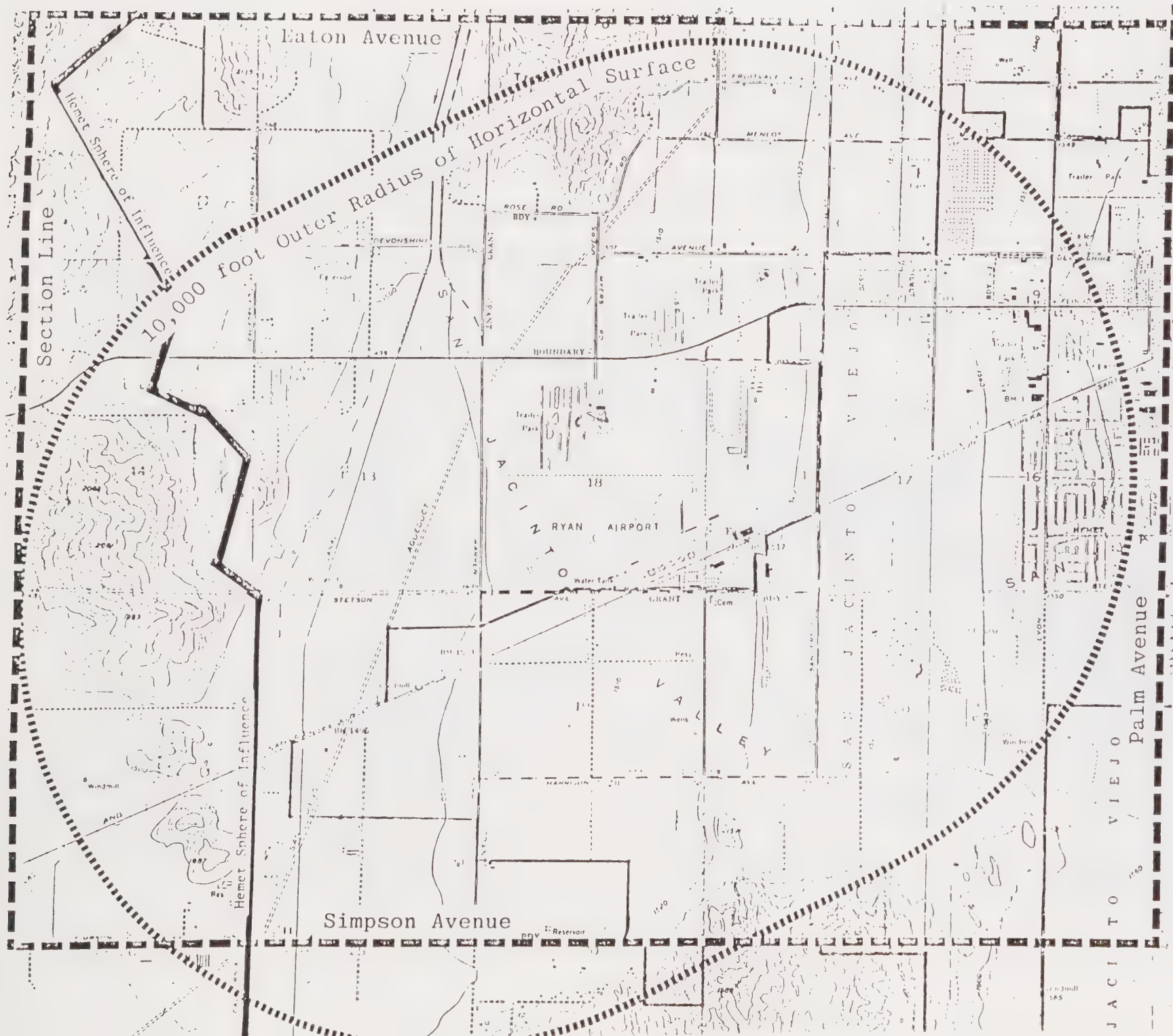
FIGURE 2

EXHIBIT II
AREA OF
GREATEST SAFETY CONCERN
(AREA II)

LEGEND



Flight Paths



NORTH
No SCALE

FIGURE 3

EXHIBIT III
AIRPORT-INFLUENCED
AREA
(AREA III)

LEGEND

Airport-Influenced
Area Boundary

I I

NOISE IN THE CITY OF HEMET

NOISE IN THE CITY OF HEMET

A primary objective of the noise element is to provide information about the City's noise environment so that noise may be systematically included in the evaluation of land use alternatives.

In Hemet, as in most areas, transportation facilities are by far the most significant sources of noise. This is due in terms of the magnitude and the number of people affected. In order to determine the extent of noise exposure from the primary noise sources in Hemet, aircraft and vehicle traffic, day-night average noise level (L_{dn}) contours were calculated, using approved analytical modeling techniques. (See Appendices F and G)

Noise contours, whether depicted graphically or tabulated, illustrate the dispersion of noise from its source, showing points of equal noise levels. L_{dn} values represent weighted-average levels that account for the magnitude, frequency of occurrence, and time of occurrence of noise events. Noise occurring at night is given added emphasis to account for its greater intrusiveness compared with daytime noise. Although a great deal of effort goes into the estimation of noise contours from analytical noise exposure models, the data normally is limited to unattended, or noise levels that are not adjusted to account for shielding effects due to existing and future man-made or natural barriers such as structures or terrain. At best, contours provide a good first estimate of noise exposure around major transportation facilities. Precise noise information is normally obtained by conducting site by site detailed noise analysis, including noise measurements. However, noise contour data can be used as a basis for determining noise/land use compatibilities.

Hemet-Ryan Airport Noise Contours

Hemet-Ryan Airport is presently operating and is expected to continue operating as a general aviation facility, augmented by fire bomber and glider based activities. The airport is located in the County of Riverside near the southwestern boundary of the City. General aviation operations are primarily a result of single engine and twin engine propeller type aircraft and a small percentage due to twin engine business jets.

Fire bombing operations in the greater Southern California area are centrally located and based at Hemet-Ryan Airport. Such activities usually occur during the fire sensitive months of the year, and are carried out using the following type of aircraft: Fixed-wing propeller aircraft such as the S-2, DC-4/6/7, B-17 and the jet-assisted C-119 J.

Glider tow aircraft (150 Hp single engine propeller type) operate from a small parallel runway just north of the main runway. Glider tow aircraft represent about 13 percent of the non-fire bomber related operations at Hemet-Ryan Airport.

Aircraft take-off and land to the southwest 97 percent of the time. The northeast runway is used 3 percent of the time. Fire bomber aircraft fly approximately 98 percent of their missions between 7:00 AM and 10:00 PM and 2 percent between 10:00 PM and 7:00 AM. Other aircraft use the airport at night 5 percent of the time with most (95 percent) of their flights occurring between 7:00 AM and 10:00 PM*.

The current (1978) and future (year 2000) noise exposure contours for Hemet-Ryan Airport are presented in Figures 2 and 3 of this report. Contours are provided for L_{dn} values of 55 L_{dn} , 65 L_{dn} , and 70 L_{dn} . The contour maps depicted in Figures 2 and 3 have been mapped at a scale of 1" = 1000' and are on file with the City of Hemet.

Major Roadways Noise Contours

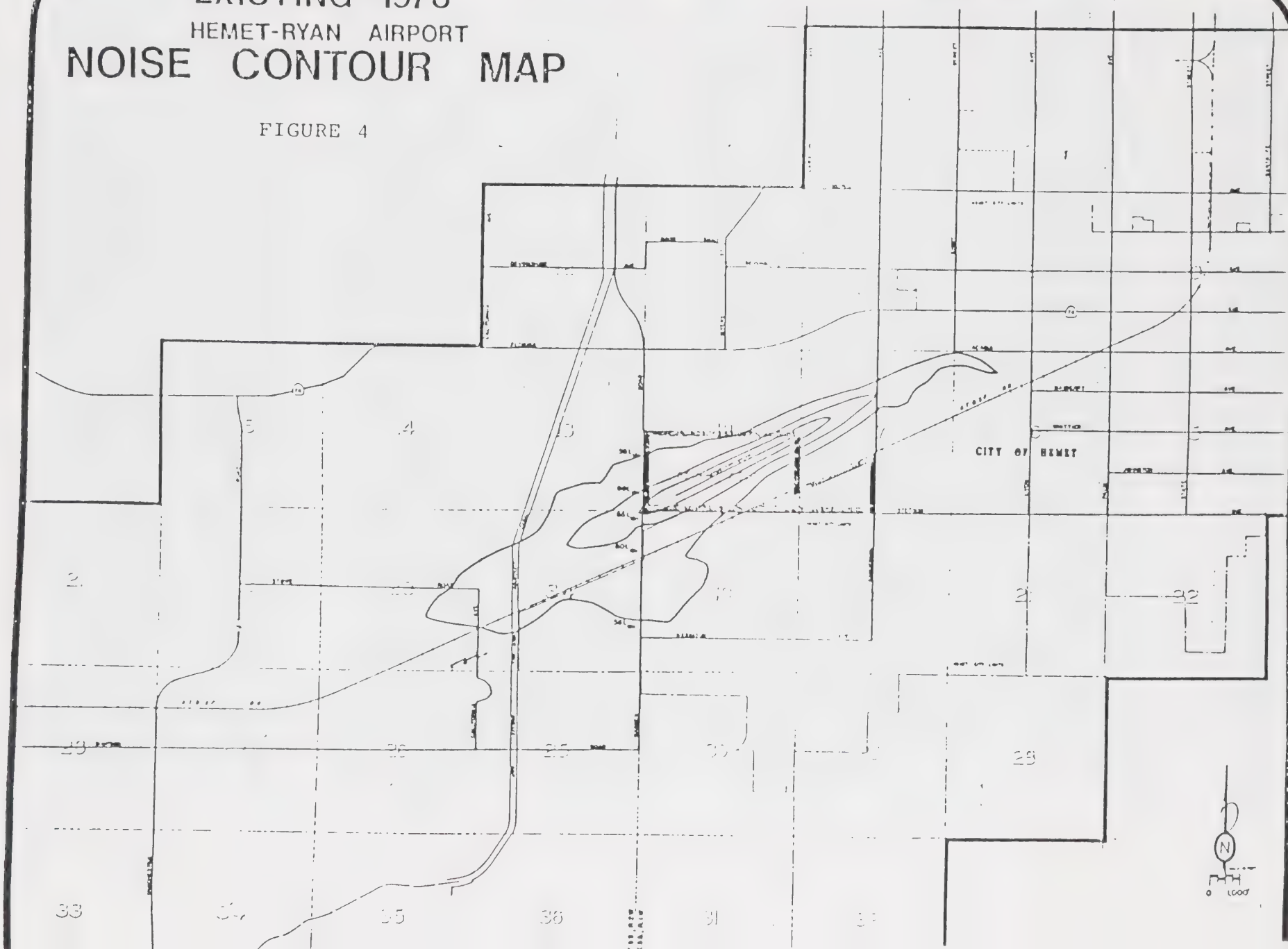
Day-night average sound levels (L_{dn}) from traffic on major roadways within the City of Hemet can be calculated from information about current and future traffic volumes, truck traffic volumes, traffic speeds and the distribution of traffic between daytime and nighttime hours. The noise contours data contained in the City of Hemet Noise Element are based on procedures developed by the Federal Highway Administration - FHWA Highway Traffic Noise Prediction Model RD-77-108.

Current (1979) and future (year 2000) noise exposure levels (L_{dn}) for major roadways in Hemet are presented in Figures 4 and 5. Highway noise levels are illustrated in terms of the approximate distance expressed in feet from centerline of highway to a value of 60 L_{dn} . Detailed information for each applicable roadway segment in terms of 55 L_{dn} , 60 L_{dn} , 65 L_{dn} , and 70 L_{dn} is contained in Appendix G, Tables P, Q, R and S.

* The technical data base and source of information used to determine current and future levels of noise exposure are contained in Appendix F.

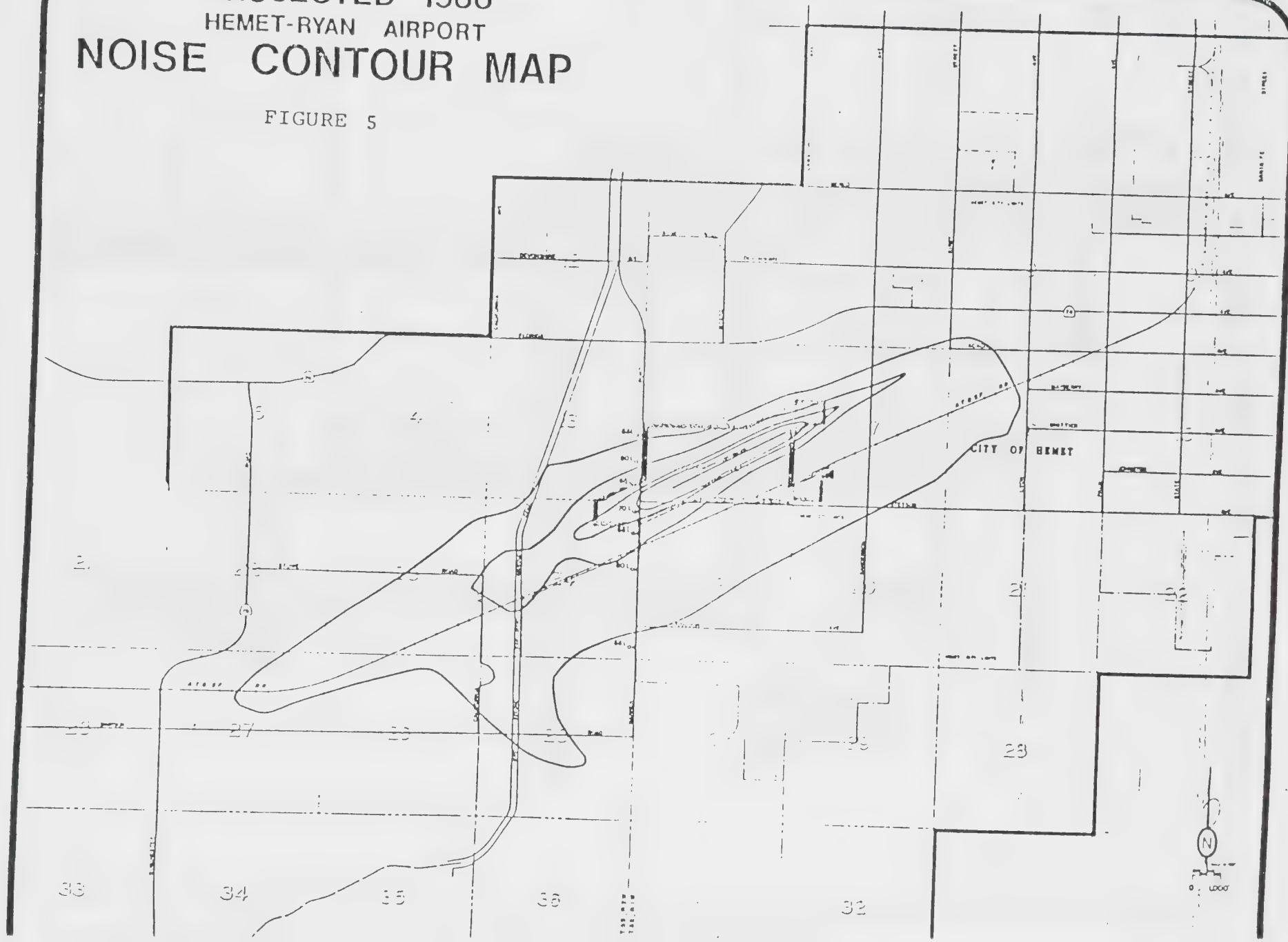
EXISTING - 1978
HEMET-RYAN AIRPORT
NOISE CONTOUR MAP

FIGURE 4



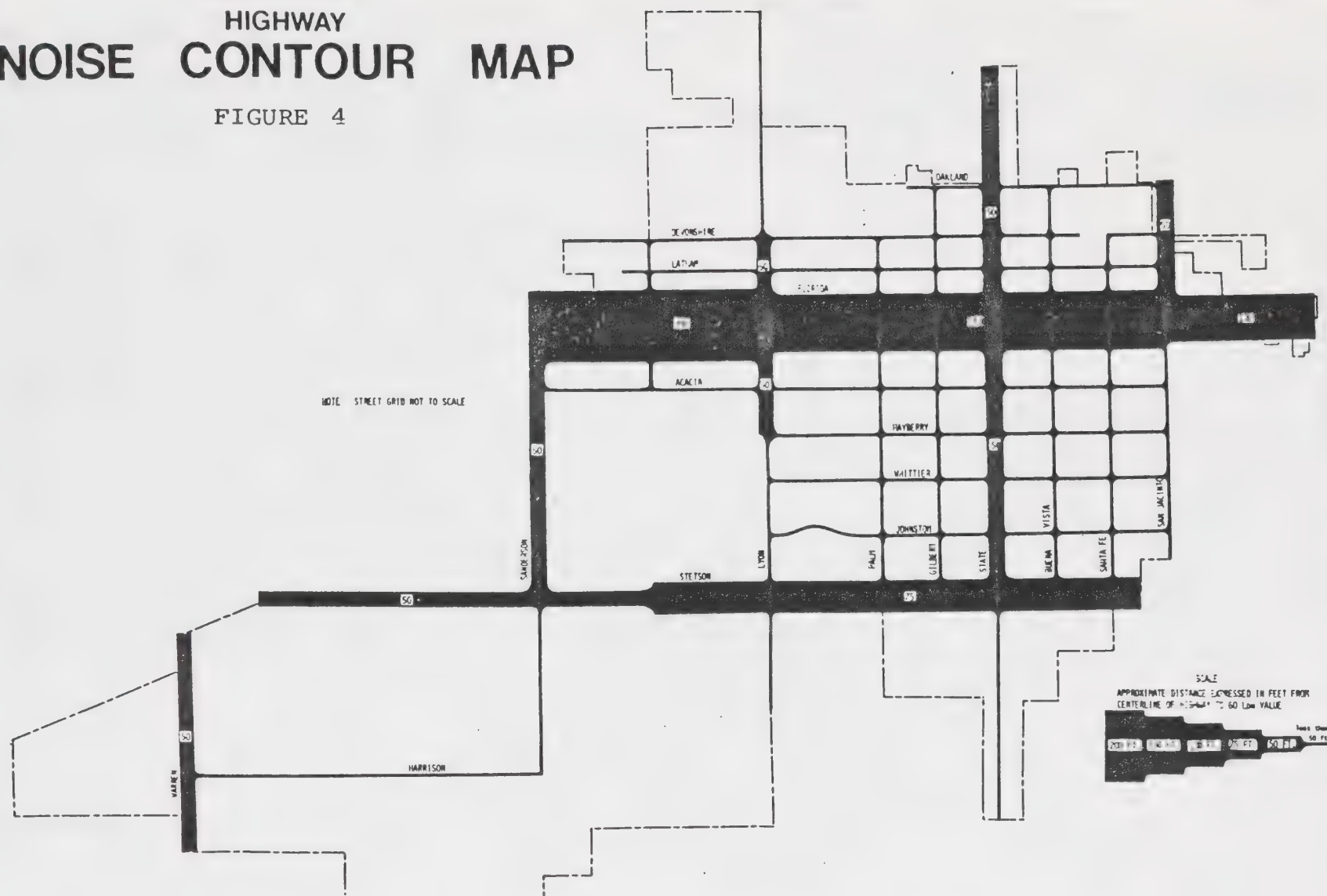
PROJECTED - 1986
HEMET-RYAN AIRPORT
NOISE CONTOUR MAP

FIGURE 5



YEAR-1979 HIGHWAY NOISE CONTOUR MAP

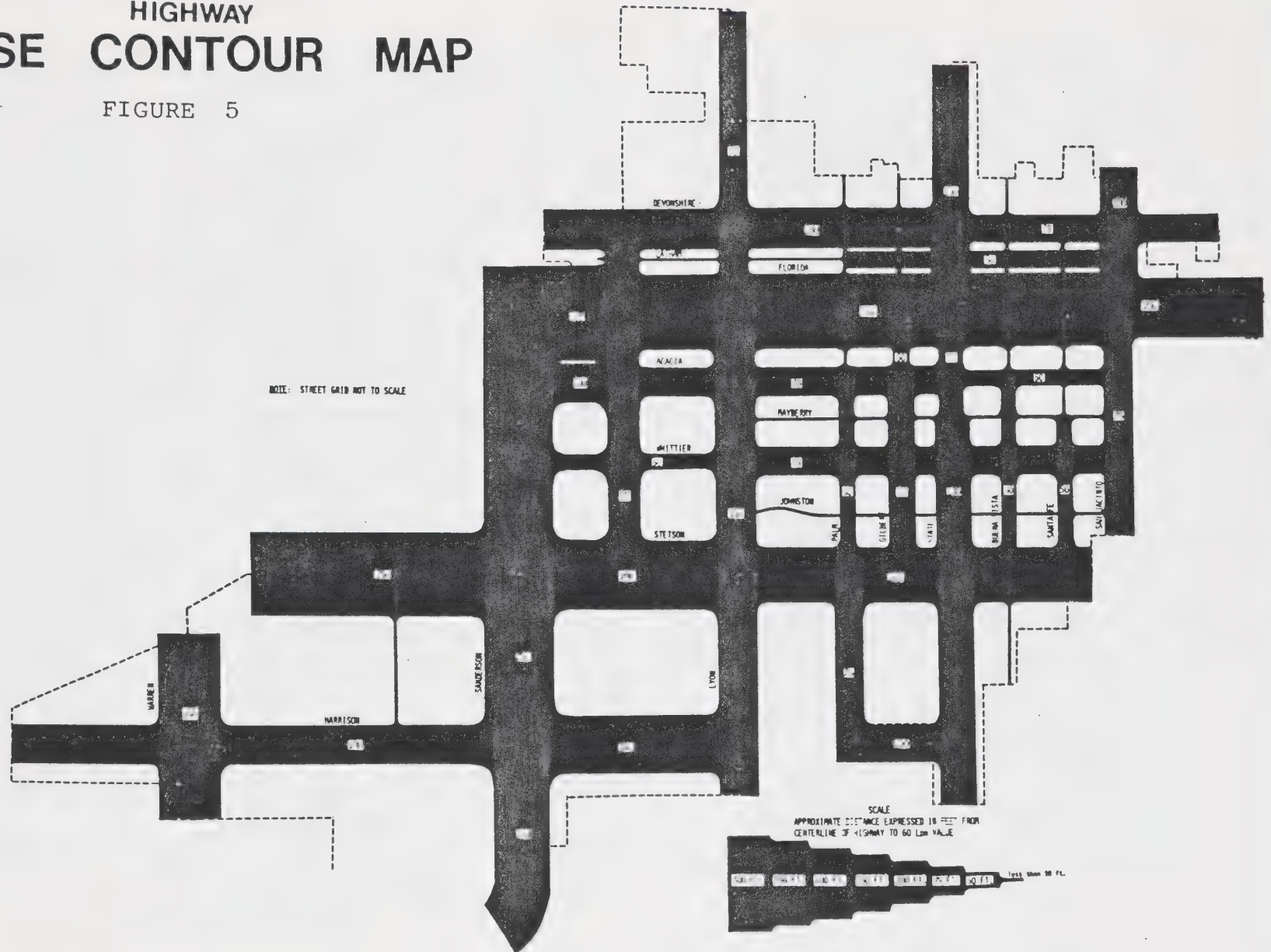
FIGURE 4



SOURCE: ULTRASYSTEMS, INC.
1979

YEAR 2000 HIGHWAY NOISE CONTOUR MAP

FIGURE 5



As seen in Figures 3 and 4, and summarized in Table 1, highway traffic noise levels are expected to increase substantially by the projected traffic year 2000. However, there may be factors which could result in noise levels being less than those presented for the future case condition. Noise level increases, as previously noted, are closely related to increased population, housing, employment, and income, and may be affected by future development decisions, the future availability of petroleum-based fuels, and limits imposed on motor vehicles to meet State noise standards*.

Railroad Noise

The Atcheson Topeka and Santa Fe Railroad operates a branch line within the City limits of Hemet. The railroad extends from the northern boundary of the City parallel to State Street for approximately one mile, then changes in a southwesterly direction through the City. Railroad operation noise contours were not calculated since railroad traffic is minimal in Hemet, and is not expected to increase significantly in the future. Approximately 3 freight trains traverse the City on an average day, all of which occur during the daylight hours.

If demand increases for rail transport in the City of Hemet in the years to come, it would be necessary to determine noise exposure levels within the community in order to reduce potential land use incompatibilities.

Agricultural Operations: Noise Problems

There are several areas within the City of Hemet and adjacent unincorporated County area where existing agricultural operations create a unique noise problem. Specifically, there are several fields where alfalfa is cultivated during the months of April to December, and necessitating harvesting every 28 days or so. Each harvest takes approximately 3 to 4 days and, out of necessity, must be cut after the heat is out of the plants to prevent spoilage during shipment. Sometimes, therefore, the machinery is in operation during the early morning hours, thereby disturbing adjacent residential areas.

* Refer to Appendix D for an explanation of existing State Noise Legislation.

TABLE 1

NOISE LEVEL CHANGE
DELTA DBA FROM YEAR 1979 TO 2000

1	DEVONSHIRE - CITY BDR./STATE	8.1
2	STATE/SANTA FE	7.0
3	SANTA FE/CITY BDRY.	10.0
4	LATHAM - KIRBY/PALM	3.0
5	PALM/GILBERT	3.0
6	GILBERT/STATE	3.0
7	STATE/SAN JACINTO	2.0
8	FLORIDA - SANDERSON/LYON	3.4
9	LYON/SAN JACINTO	2.6
10	SAN JACINTO/CITY BDRY.	2.1
11	ACACIA - SANDERSON/LYON	9.0
12	LYON/STATE	6.7
13	STATE/SAN JACINTO	5.1
14	MAYBERRY - LYON/STATE	7.0
15	STATE/CITY BDRY.	6.0
16	WHITTIER - SANDERSON/LYON	19.5
17	LYON/STATE	10.8
18	STATE/SAN JACINTO	8.1

Source: Ultrasystems, Inc.
1979

TABLE 1 (CONTINUED)

NOISE LEVEL CHANGE
DELTA DBA FROM YEAR 1979 TO 2000

19	JOHNSTON	- LYON/SAN JACINTO	7.4
20	STETSON	- CITY BDRY./SANDERSON	10.0
21		SANDERSON/KIRBY	8.7
22		KIRBY/LYON	7.2
23		LYON/STATE	6.1
24		STATE/CITY BDRY.	4.5
25	HARRISON	- CITY BDRY./SANDERSON	22.0
26		SANDERSON/LYON	22.8
27		PALM/STATE	22.0
28	WARREN	- CITY BDRY./CITY BDRY.	7.0
29	CAWSTON	- HARRISON/STETSON	19.0
30	SANDERSON	- CITY BDRY./HARRISON	22.3
31		HARRISON/STETSON	24.1
32		STETSON/FLORIDA	7.4
33	KIRBY	- STETSON/FLORIDA	17.8
34		FLORIDA/DEVONSHIRE	6.8
35	LYON	- CITY BDRY./STETSON	20.8
36		STETSON/MAYBERRY	8.3
37		MAYBERRY/FLORIDA	4.2
38		FLORIDA/DEVONSHIRE	2.7
39		DEVONSHIRE/CITY BDRY.	3.8

TABLE 1 (CONTINUED)

			NOISE LEVEL CHANGE
			DELTA DBA FROM YEAR 1979 TO 2000
40	PALM	- HARRISON/STETSON	19.5
41		STETSON/ACACIA	5.6
42		ACACIA/FLORIDA	3.0
43		FLORIDA/CITY BDRY.	5.1
44	GILBERT	- STETSON/ACACIA	10.0
45		ACACIA/FLORIDA	8.2
46		FLORIDA/OAKLAND	9.0
47	STATE	- CITY BDRY./STETSON	22.8
48		STETSON/MAYBERRY	4.9
49		MAYBERRY/ACACIA	4.1
50		ACACIA/FLORIDA	4.9
51		FLORIDA/CITY BDRY.	3.4
52	BUENA VISTA-	CITY BDRY./STETSON	14.8
53		STETSON/MAYBERRY	6.5
54		MAYBERRY/ACACIA	4.1
55		ACACIA/FLORIDA	3.5
56		FLORIDA/OAKLAND	4.8
57	SANTA FE	- STETSON/MAYBERRY	5.6
58		MAYBERRY/FLORIDA	3.2
59		FLORIDA/DEVONSHIRE	5.2
60	SAN JACINTO-	CITY BDRY./ACACIA	5.3

Some of the residents of these affected areas have had their sleep disturbed, on occasion, and have complained to the City and/or the property owners. This presents a unique and difficult-to-resolve problem for several reasons. First of all, due to rising taxes, high water rates, and the resultant difficulty to make agriculture a viable economic endeavor, these properties may eventually convert to urban land uses unless the State develops economic tools whereby preservation of agricultural land can be successfully implemented. Secondly, although a noise nuisance is being created sporadically by the farming operations, the areas serve as open space and provide a desirable visual amenity.

Emergency Vehicles

The use of sirens and horns on emergency vehicles creates a nuisance problem, especially during the late night and early morning hours. The authority for proper usage of sirens is outlined in the State of California Vehicle Code which preempts the City of Hemet's authority with respect to emergency vehicles. According to the Vehicle Code, all authorized emergency vehicles shall be equipped with a siren. They may sound the siren as may be reasonably necessary as a warning to other drivers and pedestrians. If the vehicle is being driven in response to an emergency call, the Vehicle Code requires the use of a siren and/or horns.

Domestic Activity

Noise produced in residential areas generally result from such activities as loud parties, yard maintenance equipment, home power tools, air conditioning units, and barking dogs.

Industrial and Commercial Uses

The City contains relatively few sources of stationary noise. The only areas where concentration of noise may be experienced are the commercial centers and industrial areas. Noise sources associated with industrial and commercial uses generally include, but are not limited to, machinery, air conditioning units, maintenance equipment, and truck deliveries.

III
GOALS, POLICIES, AND
IMPLEMENTATION PROGRAMS

GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS

The City of Hemet's primary opportunities to manage the noise environment within its jurisdiction lie in:

- (1.) Planning for compatible land uses near existing or proposed transportation facilities and roadways.
- (2.) Imposing noise standards on proposed noise-sensitive developments near existing or proposed transportation facilities and roadways.
- (3.) Adopting a comprehensive noise ordinance.

The following goals, policies and implementation programs are to be used by the City of Hemet to protect the health and welfare of its existing and future residents.

Goals

The goals of the noise element are to identify potential noise problem areas, establish acceptable levels of noise for land use planning purposes, maintain acceptable noise levels through proper land use planning and noise mitigation techniques, insure continuing evaluation of the noise environment, and promote noise awareness in the community.

Policies and Implementation Programs

- (1.) Identify the primary noise producing activities within or near the boundaries of the City, and calculate existing and future noise exposure levels resulting from the primary noise producing elements, i.e., aircraft and vehicle traffic.
- (2.) Adopt acceptable levels of noise for "noise sensitive" land uses within the City of Hemet:
 - As a condition of Tentative Map approval and building permit issuance for any use within the Airport Influence Area (the area defined in Figure 3 "Airport Influence Area") an Avigation Easement shall be recorded in favor of the City of Hemet.
 - Require an interior noise level of 45 Ldn for all newly constructed residences, hospitals and nursing homes and an exterior noise level of 60 Ldn in usable yard areas of residences and nursing homes.
 - Restrict new schools of standard construction within an exterior noise environment equal to or greater than 65 Ldn.

- (3.) Adopt a comprehensive noise ordinance.
- Limit the amount of noise which can be created on property owned, leased, or occupied, or otherwise controlled by such persons, when such noise causes the noise level on any other residential or noise sensitive land use to exceed an acceptable level as determined by the City of Hemet.
 - Limit the hours of construction activity near residences, hospitals and nursing homes in order to reduce the intrusion of noise in the early morning and late evening hours and on weekends and legal holidays.
 - Limit the hours of non-emergency service and maintenance vehicle/related equipment during early morning and late evening hours.
- (4.) Promote the effective enforcement of State and Federal Noise Standards.
- Enforce the California Noise Insulation Standards (Title 25) by the appropriate City Department(s).
 - Encourage the enforcement of State Motor Vehicle Standards for cars, trucks and motorcycles through coordination with the California Highway Patrol and Hemet Police Department.
 - Encourage the Atchison Topeka and Santa Fe Railroad to maintain all Federally established noise standards.
- (5.) Establish truck routes within the City of Hemet.
- Prohibit commercial and industrial related truck traffic on secondary and residential collector streets.
- (6.) Reduce transportation and stationary related noise through proper acoustical site planning and acoustical construction.
- When determined necessary to reduce transportation related noise to acceptable levels, require noise mitigation measures such as lot and building setbacks, noise barriers, and acoustical treatment to noise sensitive land use structures.
 - Require setbacks, utilization of greenbelts, or the construction of noise barriers in areas proposed or occupied by commercial, industrial, and parking area when located adjacent to new or existing "noise sensitive" land uses.
 - Control noise intrusions from stationary outdoor machinery, appliances, and air conditioning units through proper location and acoustical enclosure.

- (7.) Evaluate community noise surveys and analyses or Environmental Impact Reports which have been required for any new development projects.
- (8.) Encourage governmental agencies involved with noise source generation in the City of Hemet or adjacent County areas to provide detailed noise measurements. e.g., County Airport Land Use Commission.
- (9.) Establish and maintain coordination among Federal, State, and County and City agencies regarding new standards and criteria in evaluating community noise.
- (10.) Develop a method and maintain a list of noise complaints received in the City of Hemet and adjacent County boundaries.
- (11.) Provide for the review of the noise element every five (5) years.
- (12.) Inform residents of the effects of community noise and of the ways they can participate or assist in its abatement.
- (13.) Research and publish new information related to the various aspects of community noise.
- (14.) Enforce all Hemet/Ryan airport policies contained with the 1982 Airport Position Paper.

IV
NOISE MITIGATION:
ALTERNATIVES

NOISE MITIGATION: ALTERNATIVES

Control over environmental noise impact can be exercised either at the point of noise origination or at the point of noise reception. That is, either the thing making noise can be quieted, or those who are exposed to the noise can be shielded in some manner. Reducing noise at its source is clearly the more desirable of these two approaches because it places the cost of noise mitigation on those who are responsible for its generation. However, federal and state pre-emptive legislation limits the ability of the City to directly regulate major noise sources. Therefore, efforts to achieve noise compatibility in land use must concentrate on indirect noise source control and on measures designed to insulate noise-sensitive uses from noise sources.

Control of Noise at its Source

Noise source reduction can be accomplished by designing products to make less noise or by locating and using noise products in such a way as to minimize their impact. The federal government has reserved for itself authority to set product noise emission standards.¹ Federal emission standards currently exist only for newly manufactured aircraft, medium and heavy trucks, railroad locomotives and railcars, and portable air compressors. The Environmental Protection Agency (EPA) has limits under consideration for a number of other devices. Where the EPA has adopted a product noise standard, state and local governments may not enforce noise regulations aimed at the manufacture or sale of such products. Local governments do, however, retain authority to control noise impact through regulations affecting the use or location of noise sources. For example, while the City of Hemet may not enact an ordinance prohibiting the sale of air compressors producing more than, say, 90 dB, they may enact an ordinance restricting locations where air compressors may be used, restricting time of day when they may be used, or restricting the amount of air compressor noise which may "trespass" on any public or private property. Opportunities for the City to exercise control, either direct or indirect, over major noise sources will be discussed here.

Aircraft Noise. Federal Aviation Regulations set noise

¹Noise Control Act of 1972 (49 U.S.C., Section 4901 et seq)

emission standards for new aircraft, and full benefit from these standards will be realized only after many years of attrition of older equipment. In the meantime, other steps can be taken to reduce aircraft noise impact.

At the discretion of the Federal Aviation Administration, aircraft operational procedures (traffic patterns, pattern altitudes, glide slopes) may be modified to reduce noise over sensitive areas.

Airport proprietors may regulate use of their facilities.

1. The airport can be closed to noisier aircraft types.
2. The airport can be closed at night.
3. "Touch and go" operations can be limited at night.
4. A variable landing fee structure can be set up to discourage noisier aircraft types and nighttime operations.
5. Services can be limited to discourage noisier aircraft (for example, not supplying turbine fuel to discourage jets and turbo props).

An educational campaign can be initiated to develop a greater sensitivity for noise problems among pilots. Pilots can be encouraged to minimize low altitude "sight seeing" over populated areas; to avoid high propellor r.p.m. settings when unnecessary; to plan approaches and departures consistent with established traffic patterns so as to avoid flight over residential areas.

Railroad Noise. Noise level limitations on train noise adopted by the EPA promise little reduction of noise from this source since limits are actually no less than levels currently experienced in the City. Local governments have no authority to restrict railroad operations. Thus, the only remaining opportunity to reduce railroad noise impact is to control the use of land in the immediate vicinity of the railroad.

Motor Vehicle Noise. The California Vehicle Code contains noise limits applicable to new vehicles at the time of manufacture and noise regulations pertaining to the operation of all vehicles on public roads. Evidence of compliance with the new vehicle standards is required before a vehicle can be registered. Operational limitations include quantitative noise standards, requirements that vehicle muffler systems be maintained in good repair, and prohibitions against modifying exhaust systems so they create more noise than would a stock system.

Other methods for reducing motor vehicle noise include establishing truck routes, reducing vehicle speeds, and regulating traffic flow. Routing heavy trucks away from residential or other noise-sensitive areas and onto roads where less impact

would result can be a very effective solution to high traffic noise levels.

One step removed from controlling motor vehicle noise directly at its source is the abatement of traffic noise in the planning and design of roads. The methods of abatement that are available include route selection, acquisition of extra right-of-way width to act as a buffer, depression of the roadway, and the use of noise barriers.

At the time new highways or major local roads are planned, the route selection process should consider the noise sensitivity of lands through which the road will pass. Increasing the distance between the roadway and sensitive receptors such as hospitals, schools, and residential areas will affect transmission of noise to these uses. Acquiring wider rights-of-way will accomplish the same purpose, however, this alternative is relatively inefficient due to the distances required to achieve acceptable noise levels. Assuming the highway to be a line source, the distance between the highway and point of noise reception must be doubled to reduce traffic noise by 4.5 dB. In some cases, horizontal adjustments in alignment may be appropriate in order to take advantage of shielding by natural terrain.

Acoustic barriers placed between the roadway and sensitive receptors are an excellent method to limit traffic noise propagation along uninterrupted stretches of road. To be effective, a barrier must be high enough and long enough to at least block line of sight to the vehicle noise source. Where heavy trucks are present this will require a barrier 8 feet high or more, since the acoustic center of truck exhaust stacks may be 8 feet above the ground. Effectiveness of the barrier is influenced by the geometry of the source-barrier-receiver relationship.

Earth berms have noise reduction properties comparable to vertical walls which are used as barriers. They have additional advantages: berms can be landscaped so they are visually more attractive than a vertical barrier of equivalent height and instead of reflecting noise from one side of the highway to the other, as walls may, and thus increasing the noise heard on the opposite side, they tend to deflect sound upwards. Berms have a disadvantage in the amount of land area needed to create a barrier of sufficient height to block the noise path. A berm 12 feet high with 2 to 1 side slopes would have to be at least 48 feet in cross section at its base. Using a lower berm with a wall on top is a better alternative from a cost and performance perspective.

Plantings in a buffer strip have some capability to absorb

and scatter sound waves. However, their effectiveness is limited unless the planted area is very wide (100 feet or more) and the trees, shrubs, and ground cover is very dense.¹ It has been suggested that the principal effect of landscaping is psychological. By blocking view of the noise source, plantings can reduce annoyance and complaints about noise. The fact that people cannot see the highway can reduce their awareness of it, even though the noise remains.²

Commercial/Industrial Noise. Controlling noise from a commercial or industrial use is best accomplished at the time the facility is being designed. Often, the site layout and building design can be arranged to reduce noise transmission from the commercial or industrial property. Opportunities may also exist when the physical plant is being extensively remodeled or when the use of an existing facility is being changed. Design considerations include:

- Siting of traffic access points, loading areas, parking lots, and solid waste collection areas
- Enclosing or baffling machinery which must be placed outdoors
- Using structures as noise barriers
- Using solid walls around the perimeter of the site.

When applicable, Environmental Impact Reports provide a vehicle for the analysis of noise impacts and discussion of design alternatives.

Two principal administrative controls can be exercised to limit noise from commercial and industrial uses. The zoning ordinance can impose noise performance standards on new business and industry. A noise control ordinance can be adopted to mitigate existing noise problems in a reasonable manner. Recognizing that new technology is more readily incorporated into new industrial and commercial activities than into existing ones, it is appropriate that performance standards in the zoning ordinance specify lower noise level

¹U.S. Department of Transportation, Transportation Noise and Its Control, (Washington, D.C.: USGPO) 1972.

²U.S. Department of Transportation, Federal Highway Administration, The Audible Landscape: A Manual for Highway Noise and Land Use (Washington, D.C.).

limits than those in the noise control ordinance applicable to existing uses.

Noise from construction sites represents a special type of industrial noise. Because construction noise is temporary, people are usually more tolerant of it than permanent noise-producing installations. While acoustic "curtains" can be used around some stationary equipment, abatement is difficult because most construction activities cannot be enclosed. The most effective long-term solution to construction noise is to manufacture construction equipment that produces less noise. The U.S. Environmental Protection Agency is just beginning to issue product noise standards which will eventually result in equipment being marketed with lower noise emission characteristics. In the meantime, a reasonable way to limit construction noise impact is to regulate the time of day when construction activities may occur. Curfews on evening, nighttime, and early morning work, exempting emergency work, can be imposed through a general noise control ordinance.

Equipment Noise. The public works activities in the City involve use of some mechanical equipment producing high noise levels. It would be desirable to establish a program for acquisition of quieter equipment when new or replacement equipment must be purchased. In soliciting bids to purchase equipment, the City should ask suppliers to provide information on equipment noise emission characteristics. In evaluation the cost-efficiency of quieter products, considerations should be given to where and how the equipment will be used. Buying a quieter, but more expensive device may not be beneficial if it is to be used only in a remote location where few people will be affected.

Where the City awards contracts with private firms for construction and maintenance projects and for services such as solid waste collection, the opportunity exists to encourage contractors to use low noise emission equipment. Contractors and firms submitting contract proposals could be informed that noise control is a matter of City policy and that positive action on the part of contractors to minimize noise impact will be expected.

Domestic Noise. Noise from typical residential and recreational activities could be termed "domestic noise". Sources of domestic noise include such diverse things as: radios, stereos, television, musical instruments, workshop and home improvement tools, power gardening equipment, domestic animals, air conditioners, swimming pool equipment, model airplanes, off-road vehicles, playgrounds, organized events, and parties. While these kinds of noise are usually accepted in a residential setting, occasionally they become sources of annoyance to people and subjects of complaint to the City government. When complaints about noise from

such activities are received, they are currently handled by the Police Department. If the complaint is about something like a loud party, the presence of a Police officer responding to the complaint is usually sufficient to resolve the situation. If repeated complaints are received about the same activity, a basis may exist for citing the responsible persons for "disturbing the peace".

In response to this problem, many cities and counties have adopted general noise control ordinances. The more effective of these specify quantitative limits on noise which may not be exceeded across a property line or between apartment units. They also include time-of-day restrictions on the operation of certain noisy devices.

Control of Noise at the Receiver

A balanced approach to environmental noise control involves both the abatement of noise at its source and the isolation of noise sensitive activities from noise sources. Methods for the control of noise impact at the point of noise reception include:

- Zoning for compatible uses in the vicinity of major permanent noise sources
- Site planning techniques to shield noise sensitive development
- Design and construction techniques to insulate individual noise sensitive buildings.

Zoning for Compatible Uses. Major noise sources such as highways and airports, are regarded as virtually permanent. While in the long-term, technological advances in noise suppression may significantly reduce the impact of these sources, near- and mid-term results achieved by noise source suppression are expected to be largely offset by increases in traffic volume. To achieve noise compatibility in land use, it is therefore imperative that control be exercised over development of noise-sensitive uses in the vicinity of major noise sources. This does not mean that undeveloped land adjacent to a highway or airport remain vacant, but rather that these areas be planned for activities which are noise-compatible, or that uses which are not noise-compatible be permitted if measures to reduce on-site noise exposure are incorporated into project designs.

Noise impacted areas can be identified in the City's zoning ordinances to control the development of noise sensitive uses in these areas. An overlay zone may be appropriate for this purpose. The overlay zone could be defined to include all land exposed to noise over a certain level; its boundaries would then be coincident with, for example, the

60 dB contour displayed on the Noise Element contours. Alternatively, the overlay zone could be defined to include all land within given distances of a highway, railroad, or airport.

Within the noise overlay zone, either non-compatible uses could be excluded or site planning and building construction requirements could be imposed to reduce noise impact on the site of proposed development. The first alternative has limited applicability.

Not all undeveloped land near a major noise source can, or even should, be reserved for industrial, commercial, agricultural, or other uses that are not noise sensitive. Obviously, there is not sufficient demand for these uses to allow lining both sides of freeways, railroads, and areas around airports with them. Nor would this be a desirable spatial pattern of development.

Site Planning Techniques. Mandatory acoustical analysis of development plans could be a provision of the noise overlay zone. The purpose of this analysis would be to evaluate noise exposure on the project site and alternatives for on-site mitigation of noise exposure. Depending on the type of development and site specifics, alternatives might consist of:

- Use of setbacks and buffer strips. This is feasible for large lot developments where the site is only marginally noise impacted.
- Use of berms and walls as noise barriers.
- Height restrictions on dwellings adjacent to noise barriers. The advantage gained by constructing a barrier is lost for the second story of a dwelling which overlooks the barrier.
- Clustering dwellings to take advantage of distance or shielding offered by site topography.
- Placing non-sensitive uses such as parking areas, garages, etc., nearest the noise source.
- Orienting buildings so that they act as noise shields for balconies, patios, and yard spaces. This is most effective for two-story apartment buildings.

Design and Construction Techniques. The noise overlay zone might also define an area where special Building Code noise insulation requirements would be applicable. For structures considered to be noise sensitive, the Building Code could require either that specific construction materials and construction details be used, or that an interior noise level performance standard be met.

If a dwelling were proposed for construction in an area where the exterior noise exposure is 70 dB CNEL and if the require-

ments of the noise overlay zone were that interior noise levels should not exceed 45 dB CNEL, then the needed 25 dB of building attenuation could be obtained by meeting specific requirements. Alternatively, the Building Code could require the building to have construction plans certified by an acoustical consultant to indicate that the interior standard will be met.

The California Noise Insulation Standards, applicable to all dwellings other than detached single family dwellings, require structures to be designed to reduce exterior noise to an interior level of 45 dB CNEL. These Standards indicate that structures planned within areas exposed to exterior levels of 60 dB CNEL must undergo an acoustical analysis performed by an experienced acoustical consultant, who must certify that the interior standard will be met by the proposed structural design. Similar provisions could be extended to tracts of single family homes or other large noise sensitive developments. For these projects, certification by an acoustical consultant is preferable to imposition of inflexible materials and construction specification, since noise mitigation can be incorporated in the site design making building insulation redundant.

The physical techniques of building insulation, depending on the amount of attenuation needed, include:

- Increase the mass and stiffness of exterior walls
- Increase the width of the airspace inside exterior walls
- Increase the spacing between studs
- Use staggered studs
- Add acoustical insulation blankets inside walls
- Use resilient channels to attach interior wall covering to studs
- Weatherstrip all doors and windows
- Reduce window size on walls facing noise source
- Use unopenable windows. This may necessitate an alternate source of ventilation
- Increase glass thickness
- Install double-glazed windows
- Use solid core exterior doors
- Eliminate open beam ceilings
- Minimize penetrations of exterior walls for ducting and electrical boxes
- Arrange rooms inside dwellings so that bathrooms, kitchens, hallways, and closets are nearer the noise source and more sensitive spaces such as bedrooms and living rooms are further away
- Use heavy carpeting and drapes, and acoustical ceiling tiles to reduce reverberations within rooms.

Many of these techniques are the same ones currently being employed in new construction to increase thermal insulation. Thus, noise insulation need add little to the building cost.

GLOSSARY OF TERMS

ACOUSTIC ENVIRONMENT - The "Acoustic Environment" is the combination of sounds heard by the human ear for a given locality.

AMBIENT NOISE - "Ambient Noise" is the composite of all sounds -- near and far -- for any environment. Ambient noise levels are generally averaged for given periods of time.

ATTENUATION, SOUND - Reducing the intensity of sound signal.

A-WEIGHTED SOUND LEVEL (dBA) - A quantity, in decibels, read from a standard sound-level meter that is switched to the weighting network which discriminates against the lower frequencies according to a relationship approximating the auditory sensitivity of the human ear at moderate sound levels.

BACKGROUND NOISE - Sometimes referred to as residual noise level; a level of all the encompassing unidentifiable noise which remains after all identifiable noises have been eliminated.

CNEL - Community Noise Equivalent Level. The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7 pm to 10 pm and after addition of 10 decibels to sound levels in the night before 7 am after 10 pm.

DAY-NIGHT AVERAGE LEVEL (Ldn) - The Day-Night Average Noise is a measurement of ambient noise levels. The Ldn differs from the CNEL only in that it groups daytime and evening noise occurrences together. The cumulative measures of Ldn and CNEL generally agree within one decibel and can therefore be considered, for all practical purposes, synonymous.

DECIBEL (db) - "Decibel" is a unit for measuring the relative loudness of sounds equal approximately to the smallest degree of difference of loudness ordinarily detectable by the human ear.

EQUIVALENT ENERGY LEVEL, L_{eg} - The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given

sample period. Leg is typically computed over 1, 8, and 24 hour sample periods.

FREQUENCY - "Frequency" means the number of sound waves occurring within a given length of time. Frequency is expressed in Hertz. The human ear perceives differences in frequency as changes in pitch: The higher the frequency, the higher the pitch.

HERTZ (Hz) - "Hertz" is a unit of frequency equal to one cycle per second.

L10 STATISTICAL A-WEIGHTED NOISE LEVEL - The L10 level represents the A-weighted noise level which is exceeded for 10 percent of the time during which the noise level is measured. This measure represents the louder noises recorded during the measurement period.

LOGARITHMIC - Exponential rather than proportional or linear.

LOUDNESS - The intensive quality of sound marked by the effect on the hearing apparatus of varying sound pressures.

MAGNITUDE - "Magnitude" of a noise is its sound pressure level (that is, the air pressure changes caused by a sound wave).

MITIGATION MEASURES - Actions taken to make an effect less severe.

NOISE - Unwanted sound, usually annoying or disturbing.

NOISE ABATEMENT - Reduction of noise.

NOISE BARRIER - A construction or natural obstruction which blocks transmission or reflection of airbourne sound.

NOISE CONTOUR - A line on and passing through points where the same sound intensity level prevails. Contours form bands of varying width emanating from a noise source.

NOISE GENERATORS - Uses or activities which cause or create unwanted sound.

NOISE IMPACT AREA - The noise impact area, in square statute miles, is the total land area within the noise impact boundary less that area deemed to have a compatible land use.

NOISE REDUCTION (NR) - The noise reduction between two areas is the numerical difference, in decibels, of the average noise levels in those areas.

NOISE SENSITIVE LAND USES - Those land uses which are particularly affected by excessive noise, including residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, parks, recreation areas, etc.

PITCH - The pitch of a note is called the "frequency" and is measured by the rate of vibration in cycles per second (or Hertz). Low pitch sounds are made by slow vibrations with long wave lengths. High pitch sounds are made by fast vibrations with short wave lengths.

SOUND ABSORPTION - Sound absorption is the change of sound energy into some other form, usually heat, in passing through a medium or on striking a surface.

SOUND LEVEL (NOISE LEVEL) - The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

SOUND-LEVEL METER - An instrument, comprising a microphone, an amplifier, an output meter, and frequency-weighted networks, that is used for the measurement of noise and sound levels in a specified manner.

SOUND PRESSURE - (1) The minute fluctuations in atmospheric pressure which accompany the passage of a sound wave; the pressure fluctuations on the tympanic membrane are transmitted to the inner ear and give rise to the sensation of audible sound. (2) For a steady sound, the value of the sound pressure averaged over a period of time.

SOUND PRESSURE LEVEL - The level of sound pressure; squared and averaged over a period of time.

SPEECH INTERFERENCE LEVEL (SIL) - The SIL is the point at which a given noise level makes intelligent speech impossible. Reference is made to a gauge distance between the talker and listener.

SPECTRUM - Of a sound wave, the description, each of different amplitude and phase.

V I

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V I I
A P P E N D I C E S
A - G

APPENDIX A

NOISE: PROPERTIES AND MEASUREMENT

APPENDIX A

NOISE: PROPERTIES AND MEASUREMENT

Noise is defined as unwanted or objectionable sound. Sound is a form of energy detectable by the human hearing system, and it is commonly produced when some object is set into vibration. The vibration is transmitted to any surrounding media, such as air, causing pressure variations or "sound waves" among the air particles. These waves spread outward from the source, and along their path the waves can reflect off surfaces, they can bend around obstacles, and they can be absorbed by insulative materials. If sound waves reach one's ears, the membranes at the end of the ear canal begin vibrating. The vibration is transmitted by small bones in the middle ear to the cochlea, where the inner ear's sensory organ is located. Nerve impulses originating in the cochlea are interpreted by the brain as "sound."

Measurement of sound involves determining three variables: (1) magnitude; (2) frequency; and (3) duration.

Magnitude

The magnitude of variations in air pressure associated with a sound wave results in the quality commonly referred to as "loudness." Human ears respond to a very wide range of sound pressures, producing numbers of awkward size when sound pressures are related on an arithmetic (1,2,3...) scale. It has therefore become customary to express sound magnitude in decibels (dB) which are logarithmic (1,10,100,...) ratios comparing measured sound pressures to a reference pressure. The reference pressure commonly used in noise measurement is 20 micro-Pascals, which is considered to be the quietest sound normal ears can hear.* This sound level is assigned the value zero dB, and each increment in sound level of 20 dB represents a relative change in sound pressure of ten times.

Because decibels are logarithmic ratios, they cannot be manipulated in the same way as arithmetic numbers. Addition of decibels produces such results as $70\text{ dB} + 70\text{ dB} = 73\text{ dB}$. Thus, if a single automobile produces a sound level of 70 dB, two such automobiles would produce a total sound level of 73 dB. Twice as much acoustic energy is being generated, and this is represented in decibels as a 3 dB change. As a second example of decibel addition, if one automobile produces a sound level of 70 dB and the other 60 dB, the combined greater than about 10 decibels, the lesser sound is negligible in terms of affecting the total level.

* All "dB" notations used in this report are sound pressure levels that equal 20 MicroPascals.

A 3 dB increase in sound level represents a doubling of sound energy, but it will not be experienced as a doubling in loudness. Loudness refers to how people judge the volume of sound. As a rule of thumb, a 1 dB change in sound level requires close attention to notice a change in loudness; a 3 dB change is clearly noticeable; and a 10 dB change will be nearly twice (or one-half) as loud. A noise of 70 dB sounds about twice as loud as 60 dB and four times as loud as 50 dB. The 50 dB noise will be twice as loud as 40 dB, and so on. The following page illustrates the relationships among sound level and relative loudness.

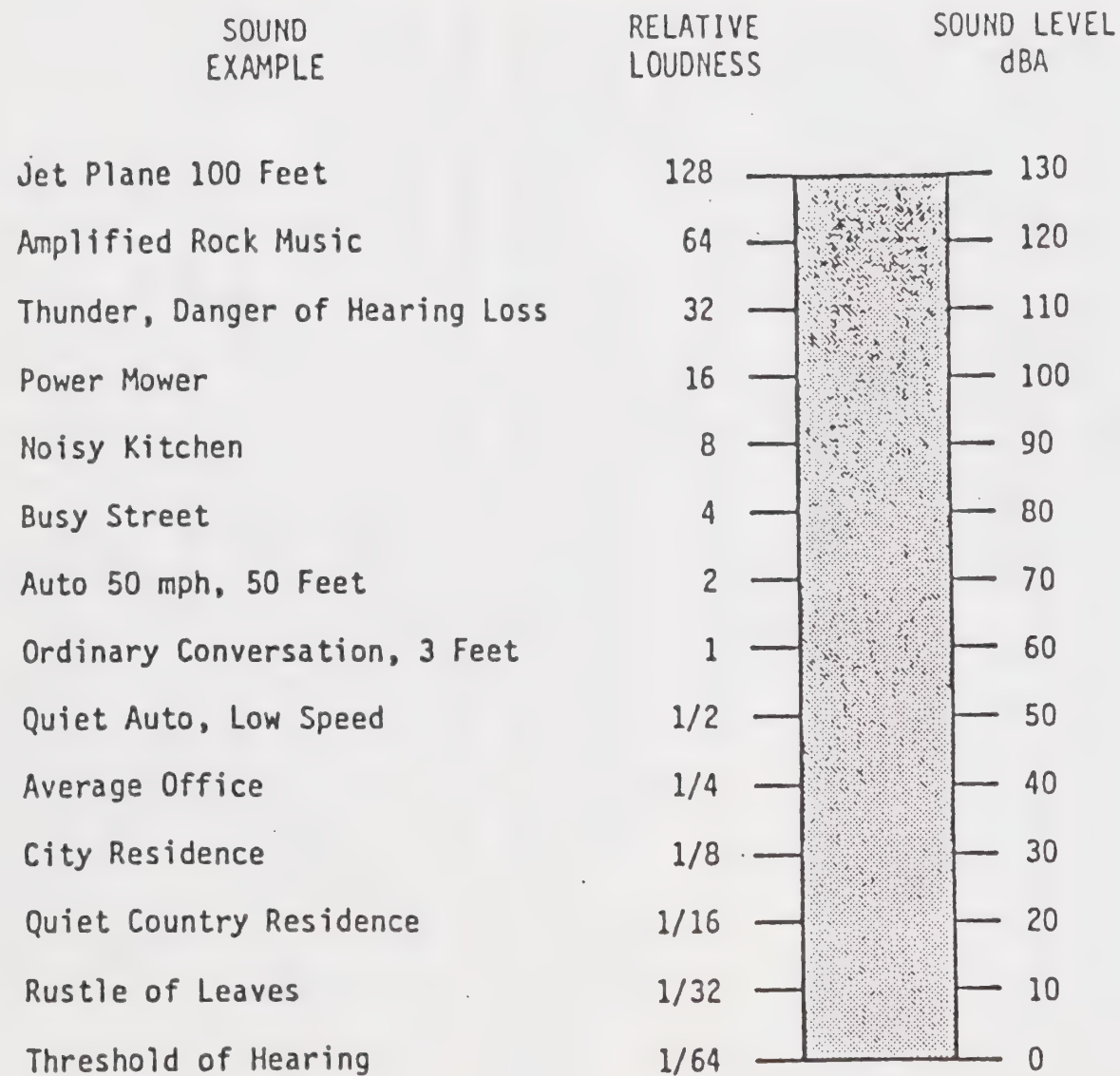
Sound level diminishes as distance from the source increases. For a point source of sound in free space, the rate at which the sound attenuates is inversely proportional to the square of distance from the source. This means the sound level will drop 6 dB each time the distance from the source is doubled. A stream of vehicles on a busy highway represents a "line" source of sound and the rate of attenuation is different from a point source. The sound level from a busy highway will drop only about 4.5 dB for each doubling of distance. Sound attenuation from a train resembles a line source near the railroad tracks and at further distances (beyond about 3/10 the length of the train) can be considered a point source.

Air and ground absorption of sound waves will further attenuate sound levels. The rate at which these factors attenuate sound depends on frequency content of the sound, air temperature, relative humidity, terrain, and type of ground cover.

Frequency

A second characteristic of sound which must be included in its measurement is frequency. Typical community sounds consist of a wide range of frequencies, from the low roar of a diesel engine to the high-pitched whine of jet aircraft. Frequency refers to the number of times per second the object producing the sound vibrates, or oscillates. The unit of measurement of frequency is Hertz - one vibration per second being equal to one Hertz (Hz).

The human ear responds to sounds whose frequencies are in the range from 20 Hz to 20,000 Hz. Frequencies above or below this range are inaudible to humans and are referred to as ultrasound and infrasound, respectively. Within



the audible range, subjective response to noise varies. People generally find higher pitched sounds to be more annoying than lower pitched sounds. Sensitivity of the ear also varies. While "loudness" depends primarily on sound pressure, it is also affected by frequency; and while "pitch" is closely related to frequency, it also depends on sound pressure. Thus, a 2,000 Hz tone at 5 dB sound pressure level sounds just as loud as a 20 Hz tone at 70 dB sound pressure level; 20 Hz at 70 dB sound pressure level is quiet to the ear; 2,000 Hz at 70 dB sound pressure level is quite loud.

Because of these variations, a great deal of effort has gone into the development of systems which relate physical measurements of noise to subjective human response. Most of these depend on calculations based on sound pressure levels response. Most of these depend on calculations based on sound pressure levels in various frequency bands "weighted" to correspond with human response. These procedures are cumbersome for most community noise assessment needs. Presently, the most widely used measure of "loudness" for community noise evaluation is the A-weighted sound level. The primary advantage of this descriptor is simplicity, and it has fair correlation with subjective assessments of loudness and annoyance. Sound levels in this report are A-weighted and referred to as "dB(A)."

Duration

The third characteristic of noise that must be accounted for to describe human noise response is duration. Noise-induced hearing loss, for example, is directly related to magnitude, frequency content, and duration of noise exposure. Annoyance due to noise is also associated with how often noise is present and how long noise persists.

Environmental noise at any location is usually fluctuating from quiet one moment to loud the next. To adequately describe a noise environment, it is necessary to quantify the variation in noise level over time. One way to do this is to use a statistical approach and specify noise levels that are observed to be exceeded a given percentage of time. Commonly used exceedance levels are:

L_{90} - That level exceeded 90 percent of the time, sometimes referred to as the Residual Noise Level.

L_{50} - That level exceeded 50 percent of the time, the median sound level.

L_{10} - That level exceeded 10 percent of the time, representing higher level, shorter duration noise.

Another approach to quantifying time-varying noise levels is to calculate the Energy Equivalent Sound Level (L_{eq}) for the time period of interest. L_{eq} represents a sound level which, if continuous, would contain the same total acoustical energy as the actual time-varying noise which occurs during the observation period.

Application of L_{eq} to problems of community noise measurement presumes that there is a trade-off between noise level and length of exposure. Two noises can represent the same amount of acoustical energy, even though one is of relatively lower level but longer duration: both noises have the same L_{eq} value and are therefore considered identical in this methodology. L_{eq} is the basis for the Community Noise Equivalent Level and Day-Night Average Level.

Time-Weighted Noise Measures; CNEL, L_{DN}

Noise in a residential, or other noise-sensitive setting, is often more bothersome at night than during daytime. At night, background noise levels outdoors are generally lower than during the day. Also, the activity in most households decreases at night, lowering internally generated noise levels. Individual noise events are therefore more intrusive at night, since they stand out against the background more sharply than during the daytime.

Community Noise Equivalent Level (CNEL) and Day-Night Average Level (L_{DN}) are noise indices that attempt to take into account differences in intrusiveness between daytime and nighttime noises. CNEL and L_{DN} values result from the averaging of hourly Energy-Equivalent Sound Levels for a 24-hour period, with a weighting factor applied to evening and nighttime L_{eq} values.

For CNEL and L_{DN} calculations, the day is divided into time periods with the following weightings:

Community Noise Equivalent Level

Daytime: 7 a.m. - 7 p.m. - weighting factor of 1

Evening: 7 p.m. - 10 p.m. - weighting factor of 5 dB

Nighttime: 10 p.m. - 7 a.m. - weighting factor of 10 dB

Day-Night Average Level

Daytime: 7 a.m. - 10 p.m. - weighting factor of 1

Nighttime: 10 p.m. - 7 a.m. - weighting factor of 10 dB

CNEL and L_{DN} have been shown to have good correlation with group responses to long-term noise exposure. In practice, CNEL and L_{DN} are virtually identical. Experience with highway, railroad, airport, and general community noise in this County has shown that the two measures consistently agree within 1.0 dB. In this report they are used interchangeably.

Noise Exposure Contours

Noise exposure contours are the mapped expression of points of equal average noise level, analagous to topographic contours which are the mapped expression of points of equal elevation. Noise contours can be drawn with respect to any noise measure; to satisfy State requirements for the Noise Element, L_{DN} and CNEL have been used in this report. Noise contours usually refer to a single source of noise such as a highway.

Ambient Noise

Ambient noise is the composite of noise from all sources which impact a given location. It is the normally existing noise environment at a particular place.

APPENDIX B
EFFECTS OF NOISE ON PEOPLE

APPENDIX B

EFFECTS OF NOISE ON PEOPLE

Noise may have a variety of consequences for physical, mental or social well-being. For discussion, these effects are categorized as either auditory or non-auditory. Auditory effects of noise include hearing loss and interference with communication. Non-auditory effects include physiological reactions, interference with sleep, adverse affects on human performance, and annoyance.

AUDITORY EFFECTSHearing Loss

Permanent hearing loss is, so far as is presently known, the most severe effect of noise upon health. While noise-induced hearing loss was once associated primarily with certain industrial situations, increasing numbers of people in urban areas are presently exposed to ambient noise levels which over long periods of exposure will cause significant hearing impairment. Even where daily exposure to general community noise does not in itself pose a distinct hazard to hearing, it may still contribute to hearing loss. Community noise may prevent the person who works in a high noise situation from receiving enough quiet while off the job to allow the ears to recuperate from temporary hearing loss experienced on the job.

Hearing loss may be either temporary or permanent. Temporary loss, attributable to fatigue of the inner ear, can occur after brief exposure to high noise levels, or after longer exposure to more moderate levels. Often this temporary decrease in hearing acuity is accompanied by ringing or buzzing sensations in the ears. Continued exposure to levels sufficient to cause temporary hearing impairment can, over a period of time, result in damage to the inner ear that is permanent. Permanent hearing loss cannot be restored, either through medical treatment or hearing aids.

Hearing loss resulting from noise is referred to as a "noise-induced threshold shift". It usually first affects those frequencies necessary to hear and understand speech communication. People who have a moderate threshold shift often are not aware of the condition except for the difficulty they experience in understanding others' speech, especially when some background sounds are also present.

Noise-induced permanent threshold shift is related to the intensity, duration, and frequency content of noise exposure. From extensive studies of industrial noise, it has been found that 8-hour exposure to continuous noise levels below approximately 80 dB does not cause significant permanent threshold shift .

However, temporary threshold shift is experienced at these and even lower levels. Workers covered by the Occupational Safety and Health Act (OSHA) must be protected from noise exposures exceeding 90 dB(A) for 8 hours; there is some question whether this standard adequately protects workers against hearing impairment . For non-occupationally related exposure to intermittent and fluctuating noise for periods greater than eight hours, little primary research has been done to establish "safe" noise limits. On the basis of available evidence, the U.S. Environmental Protection Agency has concluded that a 24-hour Energy Equivalent Sound Level (L_{eq}) of 70 dB(A) is the maximum exposure consistent with long-term protection against significant hearing loss at a frequency of 4,000 Hz . Since this frequency is within the most sensitive range of the ear, protection at 4,000 Hz insures that the entire frequency spectrum of human hearing would be protected from significant hearing loss.

Speech Communication

Interference with the ability to hear and understand speech communication is one of the more common experiences of noise intrusion. In a highly developed society, much value is placed on verbal exchange. Noise can reduce the amount and quality of this interaction.

The impact of noise on speech communication can be evaluated in terms of speech intelligibility requirements. Speech intelligibility is measured in terms of the percentage of key words in a group of sentences that can be correctly understood. As noise level increases, the percentage of words understood will decrease, unless the people communicating move closer together or raise their voices. One hundred percent intelligibility is not necessary for satisfactory communication in all situations. Most people can correctly infer the content of a sentence, even though one or more words may not have been heard. Once intelligibility drops below about 90 percent, however, conversation becomes strained .

For normal one-to-one conversation to proceed in the outdoor environment (with the distance between speaker and listener usually being around five feet), background noise levels should not exceed 50-60 dB(A). This assumes that 95 percent intelligibility is satisfactory. For interior spaces, a noise level not exceeding 40-45 dB(A) will permit 100 percent sentence intelligibility. This, however, assumes the speakers are young adults with normal hearing. Children have less precise speech than do adults. Also, their knowledge of language makes them less able to understand speech when some speech cues are lost. Children under about 13, the elderly, hard of hearing, and people with dialect differences will all require lower background levels than those indicated .

NON-AUDITORY EFFECTS

Physiological Reactions

In addition to hearing loss, a number of other physiological responses to noise have been documented. Changes in cardiovascular blood pressure and blood volume, breathing rate, pulse rate, and endocrine gland secretions have all been observed to result from exposure to noise . These non-auditory effects are usually termed "arousal" or "stress" reactions and are very difficult to distinguish physiologically from responses that occur in emotional states of fear or anger. They usually take place without conscious knowledge of their occurrence.

It is not yet clear whether these physiological responses are associated with the onset or prolongation of any disease in humans. Noise has been cited as a contributing factor to the development of peptic ulcers, hypertension, colitis, migraine headaches and other disorders; but a causal link between noise exposure and non-auditory disease has not been established with certainty.

A persistent myth with regard to the effect of noise on people is that people learn to adapt to their noise environment. Adaptation implies that with repeated exposure to a stimulus, people cease to exhibit a response. While it is true that after a time people can become relatively unconscious of noise, it is uncertain whether physiological adaptation occurs, meaning that people cease to show a stress response.

Until it is proven conclusively either that physiological adaptation to noise does occur, or that stress reactions are harmless, it cannot be assumed that if people seem not consciously bothered by noise, they are not affected by noise. For the present, noise must be regarded as a potential threat to physiological well-being.

Stress reactions have not been observed at noise levels below that at which hearing loss can occur; the threshold of this stress effect seems to be 70-80 dB(A). Therefore, if people are protected from noise exposures capable of causing hearing loss, it is believed they will also be protected from the experience of any noise-induced non-auditory disease.

Sleep Interference

From everyday experience as well as laboratory research, it is evident that noise interferes with sleep. In addition to awakening a person, or preventing the person from falling asleep, noise can shift the stage of sleep from a deep, restful stage to a lighter one. In laboratory tests this is observed as a change in brain-wave pattern of a sleeping subject. The significance of these shifts in stage of sleep to a person's long term well-being has not been established.

Disruption of sleep can occur at sound levels as low as 35 dB(A), but there is a great deal of variability in response among individuals. Some people awaken consistently when exposed to rather low level noise while others practically never awaken, even at levels up to 75 dB(A). A number of factors influence the degree to which noise may interfere with sleep. Impulsive or fluctuating noise is more disruptive than steady-state noise. Familiarity with the noise may reduce its ability to awaken, but there is no clear evidence that the quality of sleep is unaffected. Noise which has some information value is more likely to wake a person. A familiar example is the parent who awakes instantly to the faint sound of a crying child, but sleeps through virtually everything else. The ability of noise to disrupt sleep is related to age. Elderly persons are much more easily awakened by noise than younger age groups, and once awakened find it more difficult to return to sleep.

Because of the number of variables involved, it has been difficult to establish a quantitative relationship between noise exposure and sleep interference. In light of present knowledge, however, researchers recommend that noise levels inside dwellings not exceed 35-40 dB(A) for satisfactory sleeping conditions.

Physical and Mental Performance

Noise levels, such as are found in certain industrial situations, are known to adversely affect the ability to perform physical tasks, even when the task requires little mental concentration. For a familiar, steady-state noise this is generally true only when the noise exceeds 90 dB(A). Irregular or unfamiliar bursts of noise can affect work efficiency at lower noise levels. Usually, the total quantity of work performed will not decrease, but the number of errors made will increase. Any task requiring the use of speech or other auditory signals will be subject to noise interference.

The ability to perform mental tasks such as reading, problem solving, or writing is also impaired by a noisy environment. As with sleep interference, there is a great deal of variability in individuals' responses. The degree of distraction, or interference with concentration, is related to the person's state of motivation, morale, stress, and fatigue, as well as characteristics of the noise such as intensity, pitch, impulsiveness, and information content. Complex or demanding tasks are more likely to be disrupted by noise than are simple assignments.

While the impact of noise on mental efficiency has not been correlated to some measure of noise exposure, higher noise levels make it less likely that performance will adapt. Even when identical performance is achieved in or out of noise, there may yet be a cost to the individual. This cost can be increased fatigue at the end of the day, or reduced ability to react to additional demands of a job.

Annoyance

Annoyance is considered here to mean feelings of displeasure or resentment associated with the experience of noise, either because the noise is judged unpleasant or because the noise disrupts some ongoing activity. Annoyance is partly a psychological response to noise and partly a sociological

response. Attitudes or values prevalent in a particular community can influence an individual's evaluation of noise.

Community-wide annoyance by noise has been extensively studied through social surveys. These attempts to gauge the intrusiveness of noise by questioning large numbers of people about the manner which noise may affect their lives and about whether and to what degree they consider noise from various sources to be disturbing. Such studies have been performed in numerous counties and in many cities and regions within the United States.

When the responses to attitudinal surveys are correlated with measurements of the noise environment to which participants are exposed, predictions of community-wide response to noise are possible. Time-integrated measures of noise (such as Community Noise Equivalent Level) allow significantly better prediction of perceived annoyance than do maximum or peak-level measures. While most surveys have addressed themselves to aircraft noise exposure, those studies of noise sources other than aircraft show relationships between noise exposure and annoyance similar to aircraft studies.

While it is impossible to predict what a particular individual's reaction to a given noise will be, there is good statistical correlation between characteristics of noise exposure and average annoyance reported by groups of individuals. The higher the average noise level, the greater the number of persons who report annoyance and the more frequently they report being bothered. As noise levels increase there is smaller variation in annoyance response, indicating a greater consensus among individuals.

The variation in response can be explained statistically by factors other than the noise itself. For example, people who are afraid of airplane crashes are more likely to be annoyed by aircraft noise. People who are more highly educated or who are more economically well-off have higher than average annoyance scores. If people feel the noise source is necessary for social or economic reasons; if they personally benefit from it; if they feel those responsible for the noise source care about their welfare, or if they like them; they are less likely to report dissatisfaction with the noise.

Subjective responses to noise can be related to the character of the noise. The higher the noise level and the longer it lasts, the more persons are bothered. Higher pitched sounds are more disturbing than lower pitches. Noises with pure tone components tend to be piercing and are therefore annoying at lower sound levels. If the noise is impulsive, intermittent, or rhythmic, it will be more bothersome than steady-state noise.

Where and when the noise occurs will influence perceived annoyance. Noise that is accepted in a downtown area may be found objectionable in a suburban or rural setting. When noise occurs in the evening or at night, it is found to be more disturbing than during the day. If noise interrupts some activity such as speech, watching television, or relaxation, it is highly objectionable. People are seldom upset with noise they themselves make or which they have chosen to experience.

A portion of any community, ranging from 2 to 10 percent of the population, will report a high degree of annoyance by noise at almost any level of intensity. At the other end of the spectrum, approximately 20 percent of the population seems almost never bothered by noise, whatever the intensity. Thus, noise control measures would not be likely to affect the reactions of those who might be classed as ultrasensitive or insensitive to noise, but would be of benefit to the remaining two-thirds of the population lying between the two extremes.

The willingness to express a formal complaint to a public agency about noise is partially dependent on attitudes and factors other than the actual degree of annoyance. Those who complain tend to be older, more highly educated, and of higher economic status than non-complainants. Complainants represent only a small fraction of those who report annoyance. This implies that it could be misleading to use the number of complaints made to a public agency about noise as an indicator of public dissatisfaction. Many people may be highly annoyed and yet never communicate this to a responsible agency.

The Environmental Protection Agency consolidated data from a number of surveys conducted in England and the United States to measure the association between noise exposure and community response. The results of this study are summarized here, showing community noise exposure in Day-Night Average Level

versus percent of residential populations reporting that they are "highly annoyed" by noise in their neighborhood.

<u>L_{DN} (dB)</u>	<u>Percent Highly Annoyed</u>
55	17%
60	25%
65	34%
70	43%
75	52%

In a recent survey conducted by the U.S. Bureau of the Census, the importance of noise as a factor influencing residents' dissatisfaction with their neighborhoods was evaluated. Ten percent of survey respondents residing in suburban areas reported they wished to move because of neighborhood conditions. Interestingly, noise was cited by 33 percent of these respondents as a condition causing their dissatisfaction while crime was cited by only 28 percent.

APPENDIX C

ENVIRONMENTAL PROTECTION AGENCY HEALTH AND WELFARE CRITERIA

APPENDIX C

ENVIRONMENTAL PROTECTION AGENCY HEALTH AND WELFARE CRITERIA

The Noise Control Act of 1972 established by statutory mandate a national policy "...to promote an environment for all Americans free from noise that jeopardizes their public health and welfare." The Environmental Protection Agency was directed by Congress to publish information about levels of environmental noise consistent with protection of public health and welfare with an adequate margin of safety. Table A summarizes levels identified by the EPA. With respect to a residential setting, this gives consideration to the following factors:

1. Conservation of hearing requires a quiet residential environment to permit the human hearing mechanism to recuperate if it is exposed to higher levels of noise in an occupational or other setting.
2. Normal speech communication outdoors requires that background levels not exceed an energy average of 50-58 dB(A).
3. Normal sound attenuation of a residential structure, with windows partly open for ventilation, will reduce exterior noise to an indoor level which should in most cases protect against sleep interference.

The levels identified by the EPA were established without consideration of cost or feasibility of attainment, and they do not constitute an agency standard. The identified levels provide a basis for assessing the effectiveness of noise source emission regulations, land use policies, and building codes, as to the degree they protect the public health and welfare. Such regulatory action must consider technical feasibility and economic reasonableness, the scale of time over which results can be expected, and specific problems of enforcement. In the process of balancing these sometimes conflicting elements, the public health and welfare consequence of a specific decision can be evaluated against the environmental noise levels identified by the EPA.

TABLE A

SUMMARY OF NOISE LEVELS IDENTIFIED AS REQUISITE TO PROTECT PUBLIC
HEALTH AND WELFARE WITH AN ADEQUATE MARGIN OF SAFETY

Effect	Level	Area
Hearing Loss	$L_{eq(24)} - 70 \text{ dB}$	All areas
Outdoor activity interference and annoyance	$L_{dn} - 55 \text{ dB}$	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq(24)} - 55 \text{ dB}$	Outdoor areas where people spend limited amounts of time, such as school yards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{dn} - 45 \text{ dB}$	Indoor residential or hospital areas.
	$L_{eq(24)} - 45 \text{ dB}$	Other indoor areas with human activities such as schools, etc.

Explanation of the information above:

1. $L_{eq(8)}$ represents sound energy averaged over an 8-hour period, while $L_{eq(24)}$ averages energy over a 24-hour period.
2. The hearing loss level identified here represents annual averages of the daily sound level over a period of forty years.

APPENDIX D
EXISTING STATE AND FEDERAL NOISE LEGISLATION

APPENDIX D

EXISTING STATE AND FEDERAL NOISE LEGISLATION

Development of County noise control policies needs to be undertaken with full knowledge of guidelines, standards, and policies already existing at state and federal levels of government. The role of the County in noise abatement is, in many instances, circumscribed by pre-emptory state or federal legislation. In other instances, the County must assume the role of enforcing standards that have been adopted at another governmental level.

Department of Housing and Community Development Noise Standards are set forth in HUD Circular 1390.2. This policy is to:

1. Encourage land utilization patterns for housing and other municipal needs that will separate uncontrollable noise sources from residential and other noise-sensitive areas.
2. Withhold HUD financial support for construction of noise-sensitive development, particularly housing, on sites which are adversely impacted by noise.

Affected programs include low-income housing assistance, interest subsidies, and loan guarantees including FHA Mortgage Insurance.

The standards define four noise exposure categories which are applied to the site of proposed construction: Acceptable, Discretionary-Normally Acceptable, Discretionary-Normally Unacceptable, and Unacceptable. These are shown in Table B. Approval of construction on sites rated Unacceptable can come only from the Secretary of HUD. In the Discretionary categories, approval requires noise attenuation measures to be included in the project design and the concurrence of the HUD Regional Administrator.

It is difficult to relate the HUD criteria to existing data describing the City's noise environment. Except for airport noise, where L_{DN} standards are specified, "Acceptable" and "Unacceptable" locations for HUD-assisted housing cannot readily be identified by reference to either the ambient noise survey data or noise contour data generated for the Noise Element. Such determinations will require on-site noise measurement.

TABLE B
DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
NOISE EXPOSURE STANDARDS FOR NEW CONSTRUCTION SITES

Exterior	Airport Noise
UNACCEPTABLE 75 dB(A)-L ₃₃ * (not to be exceeded more than 8 out of 24 hours)	75 dB(A)-L _{DN}
DISCRETIONARY-NORMALLY UNACCEPTABLE Greater than 65 dB(A)-L ₃₃ (exceeded more than 8 out of 24 hours)	65-75 dB(A)-L _{DN}
DISCRETIONARY-NORMALLY ACCEPTABLE Less than 65 dB(A)-L ₃₃ (not to be exceeded more than 8 out of 24 hours)	
ACCEPTABLE 45 dB(A)-L ₂ * (not to be exceeded more than 30 minutes out of 24 hours)	Less than 65 dB(A)-L _{DN}

Interior

ACCEPTABLE
45 dB(A)-L₃₃
(not to be exceeded more than 8 out of 24 hours)
55 dB(A)-L₄
(not to be exceeded more than 1 out of 24 hours)
45 dB(A)-L₆ (night)
(not to be exceeded more than 30 minutes out of 8 hours)

Federal Highway Administration Design Standards

Federal Highway Program Manual, Volume 7, Chapter 7 establishes "design noise levels" for the planning and design of highway projects funded by the federal aid system. The regulations require that a noise analysis be conducted for highway projects, projecting anticipated highway noise levels and identifying noise sensitive land uses in the vicinity of the project. Action is to be taken to meet the standards given in Table C to the extent that reasonable opportunities exist to do so. Federal funds may be used to construct noise barriers, to acquire land as a buffer zone, or to implement other noise abatement measures. Highway agencies are encouraged by FHWA to achieve noise levels below the "design noise levels" where this can be accomplished with benefits outweighing costs.

There is no unique relationship between the FHWA design levels and L_{DN} or CNEL measurements so that comparisons can be made with other standards. However, the FHWA criteria are based on "design hour" traffic volumes, which are roughly equivalent to peak hour traffic. Employing the rule-of-thumb that peak hour traffic volume is about 10% of average daily traffic, the following approximations to L_{DN} can be made for comparison purposes:

<u>Activity Category</u>	<u>Design Noise Level in L_{DN}</u>
A	55 (Exterior)
B	65 (Exterior)
C	70 (Exterior)
E	50 (Interior)

TABLE C
Federal Highway Administration
Design Noise Level/Activity Relationships

Activity Category	Design Noise Levels—dBA ¹		Description of Activity Category
	L _{eq} hourly	L ₁₀ hourly	
A ²	57 (Exterior)	60 (Exterior)	Tracts of land which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, open spaces, or historic districts which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B ²	67 (Exterior)	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, and parks which are not included in Category A and residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.
C	72 (Exterior)	75 (Exterior)	Developed lands, properties or activities not included in Categories A and B above.
D	--	--	For requirements on undeveloped lands, see Paragraph 11.a, and c.
E	52 (Interior)	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

¹ Either L_{eq} or L₁₀ design noise levels may be used.

² Parks in Categories A and B include all such lands (public or private) which are actually used as parks as well as those public lands officially set aside or designated by a governmental agency as parks on the date of public knowledge of the proposed highway project.

APPENDIX E
CALIFORNIA MOTOR VEHICLE NOISE STANDARDS

APPENDIX E

CALIFORNIA MOTOR VEHICLE NOISE STANDARDS

State. California's vehicle noise control program has consisted of the enforcement of maximum, new-vehicle noise emission standards and the regulation of vehicle operation. The State has the responsibility for setting noise emission standards for all motor vehicles subject to registration. The California Highway Patrol has the prime responsibility for enforcing these regulations. However, local police can also enforce them. (See Tables D, E and F).

Local. As a general rule, a City or County may make and enforce within its limits police power ordinances not in conflict with the general laws (Section VII, Article XI of the California Constitution). However, the right to control street traffic is an exercise of the sovereign power of the State. Thus, Cities and Counties may not enact noise limits to be enforceable on highways.

Local jurisdictions may, however, enact off-highway vehicular noise limits when directed at the operator. They may also designate quiet zones by banning noisy vehicles from certain streets, highways, or freeways. The State retains the authority to require off-highway vehicles to be equipped with an adequate muffler that meets the requirements of Section 38245 and 38280 of the Motor Vehicle Code. In addition, this latter section precludes the establishment of local noise regulations for newly manufactured off-road vehicles. As an illustration, the San Diego Noise Ordinance declares unlawful the operation of off-highway motor vehicles with noise emissions in excess of the noise levels permitted for on-highway vehicles, with corrections made to adjust for distances.

California Airport Noise Standards

California Administrative Code, Title 21 defines airport noise standards for all airports operating under permit from the California Department of Transportation, Division of Aeronautics. These regulations require each County to determine whether any of the airports within its boundaries has a "noise problem". An airport is defined by this legislation to have a "noise problem" if the 70 dB Community Noise Equivalent Level contour around the airport includes residential uses, schools, or land uses other than specified compatible uses. The compatible land uses are:

TABLE D
NOISE LIMITS FOR ON HIGHWAY MOTOR VEHICLES
STATE OF CALIFORNIA

	On Streets with a Grade of 1% or higher		On Streets with a Grade not exceed- ing 1%
	<u>Speed Limit of 35 mph or less</u>	<u>Speed Limit of more than 35 mph</u>	<u>Speed Limit of 35 mph or less</u>
(1) Any motor vehicle with a manufac- turer's gross vehicle weight rating of 6,000 pounds or more and any combina- tion of vehicles towed by such motor vehicle:			
(a) Before January 1, 1973	88 dB(A)	90 dB(A)	-----
(b) On and after January 1, 1973	86 dB(A)	90 dB(A)	82 dB(A)
(2) Any motorcycle other than a motor-driven cycle	82 dB(A)	86 dB(A)	77 dB(A)
(3) Any other motor vehicle and any combination of vehicles towed by such motor vehicle	76 dB(A)	82 dB(A)	74 dB(A)

SOURCE: Section 23130, 23130.5, Motor Vehicle Code

TABLE E
NOISE LIMITS FOR NEW MOTOR VEHICLES
STATE OF CALIFORNIA

S27160. (a) No person shall sell or offer for sale a new motor vehicle which produces a maximum noise exceeding the following noise limit at a distance of 50 feet from the centerline of travel under test procedures established by the department:

(1) Any motorcycle manufactured before 1970	92 dB(A)
(2) Any motorcycle, other than a motor-driven cycle, manufactured after 1969, and before 1972	88 dB(A)
(3) Any motorcycle, other than a motor-driven cycle, manufactured after 1973, and before 1975	86 dB(A)
(4) Any motorcycle, other than a motor-driven cycle, manufactured after 1974, and before 1978	83 dB(A)
(5) Any motorcycle, other than a motor-driven cycle, manufactured after 1977, and before 1988	75 dB(A)
(6) Any motorcycle, other than a motor-driven cycle, manufactured after 1987	70 dB(A)
(7) Any snowmobile manufactured on or after January 1, 1973, and before January 1, 1975	82 dB(A)
(8) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1967, and before 1973	88 dB(A)
(9) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1972, and before 1975	86 dB(A)
(10) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1974, and before 1978	83 dB(A)
(11) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1977, and before 1988	80 dB(A)
(12) Any motor vehicle with a gross vehicle weight rating of 6,000 pounds or more manufactured after 1987	70 dB(A)
(13) Any other motor vehicle manufactured after 1967, and before 1973	86 dB(A)
(14) Any other motor vehicle manufactured after 1972, and before 1975	84 dB(A)
(15) Any other motor vehicle manufactured after 1974, and before 1978	80 dB(A)
(16) Any other motor vehicle manufactured after 1977, and before 1988	75 dB(A)
(17) Any other motor vehicle manufactured after 1987	70 dB(A)

SOURCE: Section 27160, Motor Vehicle Code

TABLE F

NOISE LIMITS FOR NEW OFF-HIGHWAY MOTOR VEHICLES

STATE OF CALIFORNIA

(1)	Any such vehicle manufactured on or after January 1, 1972, and before January 1, 1973	92 dB(A)
(2)	Any such vehicle manufactured on or after January 1, 1973, and before January 1, 1975	88 dB(A)
(3)	Any such vehicle manufactured on or after January 1, 1975	86 dB(A)

SOURCE: Section 38280, Motor Vehicle Code

- a) Agricultural
- b) Airport property
- c) Industrial property
- d) Commercial property
- e) Property subject to an aviation easement for noise
- f) Zoned open space
- g) High rise apartments in which adequate noise insulation has been provided.
Adequate means the noise reduction of the structure is sufficient to assure that the interior CNEL in any habitable room does not exceed 45 dB.
- h) Existing acoustically treated homes, provided that the difference between the exterior CNEL and the noise impact criterion level (70 dB) does not exceed the difference between the noise attenuation provided by the acoustically treated home and the value 20 decibels.

After December 31, 1985, the noise impact criterion becomes 65 dB CNEL.

If an airport is determined by the County to have a "noise problem," the airport proprietor must install a continuous noise monitoring system at the airport and must implement a plan to reduce the airport's noise impact so that only compatible land uses will be within the noise impact criterion contour. Methods to be used to control the noise impact include:

- a) Encouraging use of the airport classes with lower noise level characteristics and discouraging use by higher noise level aircraft classes;
- b) Encouraging approach and departure flight paths and procedures to minimize the noise in residential areas,
- c) Planning runway utilization schedules to take into account adjacent residential areas, noise characteristics of aircraft and noise-sensitive time periods.
- d) Reduction of the flight frequency, particularly in the most noise sensitive time periods and by the noisier aircraft;

- e) Employing shielding for advantage, using natural terrain, buildings, etc., and
- f) Development of a compatible land use within the noise impact boundary.

California Noise Insulation Standards

Noise Insulation Standards are now part of the California Administrative Code, Title 25. These apply to all new multi-family dwelling units including apartment houses, condominium units, hotels, and motels. Detached single-family dwellings are excluded. The standard considers two areas of noise control: insulation of one unit from another; and isolation of interior living spaces from exterior noise. The insulation requirement is implemented through the Uniform Building Code, Chapter 35, which specifies minimum design requirements for party walls and floor/ceiling assemblies in terms of Sound Transmission Class (STC) and Impact Insulation Class (IIC) ratings.

The noise isolation requirement specifies that the interior Community Noise Equivalent Level attributable to exterior sources, shall not exceed 45 dB in any habitable room. It also states that residential structures to be located within an annual CNEL contour of 60 dB require an acoustical analysis showing that the proposed building has been designed to limit intruding noise to the allowable interior noise level. Evidence of compliance with the standard is to consist of an acoustical analysis report prepared by a person experienced in the field of acoustical engineering and submitted with the application for a building permit.

The noise contours produced for the Noise Element provide a basis for identifying residential projects which will be affected by isolation requirements of the Noise Insulation Standards. Administrative procedures need to be set up within the City so that affected projects will receive the acoustical analysis stipulated by these standards.

California Office of Noise Control, Noise Compatibility Guidelines

The California Office of Noise Control has published guidelines for evaluating land use compatibility with various noise environments. (See Table G)
These recommendations consider noise sensitivity factors such as:

1. Speech communication needs;
2. Subjective judgments of noise acceptability and relative noisiness;
3. Need for freedom from noise intrusions; and
4. Sleep sensitivity criteria.

Different considerations are involved in determining noise sensitivities for differing land uses and activities. For example, noise level limits for satisfactory speech communication in a home are different from those for satisfactory telephone usage in an office. The guidelines attempt to account for these considerations as well as anticipated noise-sensitive activities that occur both outdoors and indoors. Also recognized is the amount of outdoor-to-indoor noise reduction provided by typical structures.

In conjunction with the land use compatibility recommendations, the Office of Noise Control has developed numerical correction factors to be applied to noise sources. These values account for some of the influences which may cause noise to be more acceptable, or less acceptable, than normally expected. Significant among these influences are: existing outdoor ambient levels (which indicates relative intrusiveness of the noise source), general community attitude towards the noise source, prior history with the noise source, and total characteristics of the noise. When it is possible to evaluate some or all of these factors, the measured or estimated level of a noise source may be adjusted by means of the correction values listed in Table in order to more accurately assess the acceptability of a new noise source.

In development of these land use acceptability recommendations, the Office of Noise Control made an effort to maintain consistency with the U.S. Environmental Protection Agency's "Levels Identified as Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety."

In both the EPA findings and Office of Noise Control recommendations, an interior Day-Night Average Sound Level of 45 dB, attributable to exterior noise sources, is considered to be the maximum level consistent with normal residential activity. Considering the typical range of 12 to 18 dB(A)

noise reduction provided by residential dwellings (with windows partly open), the 60 dB value identified in Table G as "normally acceptable" for residential land use would provide an interior environment of about 45 dB.

TABLE G

LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

LAND USE CATEGORY	COMMUNITY NOISE EXPOSURE L _{dn} OR CNEL, dB					
	55	60	65	70	75	80
RESIDENTIAL — LOW DENSITY SINGLE FAMILY, DUPLEX, MOBILE HOMES						
RESIDENTIAL — MULTI. FAMILY						
TRANSIENT LODGING — MOTELS, HOTELS						
SCHOOLS, LIBRARIES, CHURCHES, HOSPITALS, NURSING HOMES						
AUDITORIUMS, CONCERT HALLS, AMPHITHEATRES						
SPORTS ARENA, OUTDOOR SPECTATOR SPORTS						
PLAYGROUNDS, NEIGHBORHOOD PARKS						
GOLF COURSES, RIDING STABLES, WATER RECREATION, CEMETERIES						
OFFICE BUILDINGS, BUSINESS COMMERCIAL AND PROFESSIONAL						
INDUSTRIAL, MANUFACTURING UTILITIES, AGRICULTURE						

INTERPRETATION



NORMALLY ACCEPTABLE

Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.



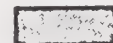
CONDITIONALLY ACCEPTABLE

New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.



NORMALLY UNACCEPTABLE

New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.



CLEARLY UNACCEPTABLE

New construction or development should generally not be undertaken.

CONSIDERATIONS IN DETERMINATION OF NOISE-COMPATIBLE LAND USE

A. NORMALIZED NOISE EXPOSURE INFORMATION DESIRED

Where sufficient data exists, evaluate land use suitability with respect to a "normalized" value of CNEL or L_{dn}. Normalized values are obtained by adding or subtracting the constants described in Table 1 to the measured or calculated value of CNEL or L_{dn}.

B. NOISE SOURCE CHARACTERISTICS

The land use-noise compatibility recommendations should be viewed in relation to the specific source of the noise. For example, aircraft and railroad noise is normally made up of higher single noise events than auto traffic but occurs less frequently. Therefore, different sources yielding the same composite noise exposure do not necessarily create the same noise environment. The State Aeronautics Act uses 65 dB CNEL as the criterion which airports must eventually meet to protect existing residential communities from unacceptable exposure to aircraft noise. In order to facilitate the purposes of the Act, one of which is to encourage land uses compatible with the 65 dB CNEL criterion wherever possible, and in order to facilitate the ability of airports to comply with the Act, residential uses located in Com-

munity Noise Exposure Areas greater than 65 dB should be discouraged and considered located within normally unacceptable areas.

C. SUITABLE INTERIOR ENVIRONMENTS

One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL or L_{dn}. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under consideration, should govern the minimum acceptable distance to a noise source.

D. ACCEPTABLE OUTDOOR ENVIRONMENTS

Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

APPENDIX F
TECHNICAL DATA BASE FOR
HEMET - RYAN AIRPORT NOISE CONTOURS

APPENDIX F

TECHNICAL DATA BASE
FOR
HEMET - RYAN AIRPORT NOISE CONTOURSInput Data

The operations data for Hemet-Ryan Airport were obtained from the Department of Airports, County of Riverside*. The operational data were for the year 1978 and 1986 and included General Aviation Aircraft, Glider Tow Aircraft, and Fire Bomber Aircraft. The projected operations for the year 1978 and 1986 by aircraft type are shown in Tables H and I.

Aircraft take-off and land to the southwest 97% of the time. The north-east runway is used 3% of the time. Fire Bomber aircraft fly 98% of their missions between 7:00 A.M. to 10:00 P.M. and 2% between 10:00 P.M. to 7:00 A.M. Other aircraft use the airport at night 5% of the time with most (95%) of their flights occurring between 7:00 A.M. and 10:00 P.M.

The flight paths used to describe Hemet-Ryan Airport are described in Table J. Aircraft utilization by runway, operation and flight track are presented in Table K.

Standard take-off and approach profiles were used for general aviation aircraft. Take-off profiles for Fire Bomber aircraft are presented in Table L. Approach profiles are presented in Table M. Fire Bomber approach profiles were modeled using a 3° glide slope.

Noise Data

Noise data for all aircraft using Hemet-Ryan Airport were readily available from the literature except for the modified C-119 Fire Bomber aircraft. This aircraft has been modified by the addition of a jet engine mounted on top of the fuselage and is used during take-off operations but not landing operations. Standard noise curves were used for the C-119 approach noise. The type of jet engine used on the C-119J is not common but was used on the Navy's Neptune (P2) aircraft. A similar engine is on the Navy's S-3 aircraft. By comparing the noise curves for the C-119, S-3 and P-2 and correcting for

*Letter Reports, July 10, 1978 and March 29, 1979 from Airports Director to Ultrasystems, Inc.

TABLE H
EXISTING 1978 ANNUAL OPERATIONS BY AIRCRAFT TYPE

General Aviation (less glider tows)	
Single Engine Propeller	51,200
Two Engine Propeller	11,520
Two Engine Business Jet	1,280
(Citation)	
Total	64,000
Glider Tow Aircraft	13,882
(150 hp single engine propeller)	
Fire Bomber Aircraft	
S-2	760
C-119J	206
DC4/6/7, B-17	314
Total	1,280
TOTAL OPERATIONS IN 1978	79,162

TABLE I
PROJECTED 1986 ANNUAL OPERATIONS BY AIRCRAFT TYPE

General Aviation (less glider tows)	
Single Engine Propeller	62,400
Two Engine Propeller	14,040
Two Engine Business Jet	1,560
Total	78,000
Glider Tow Aircraft	18,000
(150 hp single engine propeller)	
Fire Bomber Aircraft	
S-2	2,400
C-119J	800
DC4/6/7, B-17	800
Total	4,000
TOTAL PROJECTED OPERATIONS IN 1986	100,000

TABLE J
 FLIGHT PATHS AT HEMET - RYAN AIRPORT
 FOR USE IN
 DESCRIBING NOISE CONTOURS

<u>Flight Path Number</u>	<u>Description</u>
1	Runway 23L. Take-off. Start Left Turn 8000' from Break Release. Radius of Turn 4000'.
2	Runway 23L. Take-off. Straight Out - No Turns.
3	Runway 23L. Take-off. Start Left Turn 5500' from Break Release. Radius of Turn 1500'.
4	Runway 23R. Take-off. Start Right Turn 4800' from Break Release. Radius of Turn 2500'.
5	Runway 5R. Take-off. Start Right Turn 7300' from Break Release. Radius of Turn 1500'.
6	Runway 5R. Take-off. Start Right Turn 8300' from Break Release. Radius of Turn 3000'.
7	Runway 5R. Landing. Straight In.
8	Runway 23R. Landing. Start Right Turn 2800' from end of 23R. Radius of Turn 1500'.
9	Runway 5R. Landing. Start Right Turn 1200' from end of 5R. Radius of Turn 1500'.
10	Runway 23L. Landing. Start Right Turn 2000' from end of Runway 23L. Radius of Turn 1500'.
11	Runway 23L. Landing. Start Left Turn 3000' from end of Runway 23L. Radius of Turn 1500'.

TAKE OFF PROFILES
FIRE BOMBER
AIRCRAFT

Distance From Break Release (ft)	Altitude (ft)		
	S-2	C-119J	DC-4/6/7, B-17
0			
500			
1,000			
1,500			
2,000			
2,500			
3,000	25		
3,500	50	10	
4,000	80	20	20
4,500	125	35	55
5,000	170	75	90
5,500	215	115	125
6,000	260	155	160
6,500	305	195	195
7,000	350	235	230
7,500	395	275	265
8,000	440	315	300
8,500	485	355	335
9,000	530	395	370
9,500	575	435	405
10,000	620	475	440
10,500	665	515	475
11,000	710	555	510
11,500	755	595	545
12,000	800	635	580
12,500	845	675	615
13,000	890	715	650
13,500	935	755	685
14,000	980	795	720
14,500	1,025	835	755
15,000	1,070	875	790
20,000	1,520	1,275	1,140

TABLE L
TAKE OFF NOISE CURVES

Distance to Aircraft (feet)	SEL, dB						
	One Engine* Prop < 180 hp	One Engine* Prop > 180 hp	Two* Engine Prop < 12,500 lbs	Business* Jet (Cessna)	S-2 Fire Bomber	C-119J	DC-4/6/7, B-17
200	90.3	95.0	93.3	97.2	103.6	114.1	106.6
400	87.1	92.0	90.1	93.7	100.2	110.3	103.2
800	83.7	88.0	86.7	89.9	96.5	106.1	99.5
1,600	80.0	84.0	83.0	85.5	92.4	101.3	95.4
3,150	75.9	78.0	78.9	80.4	87.9	96.1	90.9
6,300	71.1	72.0	74.1	74.2	82.9	90.4	85.9
12,500	65.2	67.0	68.2	66.5	76.9	83.5	79.9
25,000	57.7	60.0	60.7	56.9	69.6	74.9	72.6

* Source: Sound Exposure Level Versus Distance Curves for Civil Aircraft, Bishop, Mills, Beckman, 1974.

TABLE M
APPROACH NOISE CURVES

Distance to Aircraft (feet)	SEL, dB						
	One Engine* Prop < 180 hp	One Engine* Prop > 180 hp	Two* Engine Prop < 12,500 lbs	Business Jet (Cessna)	S-2 Fire Bomber	C-119J	DC-4/6/7, B-17
200	83.9	92.0	86.9	86.9	93.4	102.4	96.4
400	80.4	87.0	83.4	83.2	90.1	99.2	93.1
800	76.7	81.0	79.7	79.2	86.6	95.8	89.6
1,600	72.7	76.0	75.7	74.7	82.8	92.2	85.8
3,150	68.2	70.0	71.2	69.7	78.4	88.2	81.4
6,300	63.3	64.0	66.3	63.9	73.5	83.5	76.5
12,500	57.6	58.0	60.6	57.1	67.7	78.0	70.7
25,000	50.6	52.0	53.6	48.6	60.6	71.1	63.6

the fact that the C-119J uses only one jet engine in addition to the propeller engines, a noise curve for the C-119J was derived. Table N shows a comparison of C-119 and C-119J noise for take-off.

Relative Contribution of Each Aircraft Type

Because the Fire Bombers only use the airport during emergencies, the contours generated do not represent an "average" day even though they are based on the average operation per day. To single out and identify the noise contribution of the Fire Bomber aircraft, a single point near the end of runway 5R was isolated and individual aircraft contributions were singled out. The special point was 1,500 feet southwest, along the centerline of the runway and 500 feet north of the centerline of the runway. The 1986 contour value at this point is 64 L_{dn} . Table O shows the L_{dn} contribution from the various aircraft types. Table O clearly shows that if the Fire Bombers were not considered, the L_{dn} would be 59 dB instead of 64 dB. In reality, most days do not have Fire Bomber activity while on those days that do, the L_{dn} is considerably higher than the annual contours show.

TABLE N
COMPARISON OF C-119 AND C-119J NOISE FOR TAKE-OFF OPERATIONS

Distance to Aircraft, feet	SEL, dB		dB
	C-119*	C-119J**	
200	111.1	114.1	+ 3.0
400	107.7	110.3	+ 2.6
800	104.2	106.1	+ 1.9
1,600	100.3	101.3	+ 1.0
3,150	95.8	96.1	+ 0.3
6,300	90.3	90.4	+ 0.1
12,500	83.5	83.5	0
25,000	74.9	74.9	0

TABLE O
CONTRIBUTIONS OF VARIOUS AIRCRAFT TYPES
TO A POINT WHOSE TOTAL L_{dn} IS 64 dB
1986

Aircraft Type	L_{dn} for Aircraft Type
1 engine prop, 180 hp	55.8
1 engine prop, 180 hp	53.6
2 engine prop, 12,500 lbs	52.2
Business Jet	46.6
S-2 Fire Bomber	53.3
C-119J	61.0
DC-4/6/7, B-17	53.6

* Source: Wright-Patterson Air Force Base, Medical Research Laboratory

** Source: Derived from C-119, S-3 and P-2 data.

APPENDIX G
HIGHWAY TRAFFIC NOISE MODEL, HIGHWAY TRAFFIC CHARACTERISTICS,
AND NOISE CONTOUR VALUES RESULTS

APPENDIX G

HIGHWAY TRAFFIC NOISE MODEL, HIGHWAY TRAFFIC CHARACTERISTICS,
AND NOISE CONTOUR VALUES RESULTS

Highway traffic noise levels for the existing year (1979) and the future case condition (year 2000) were calculated by computer using current state-of-the-art highway traffic noise prediction methods (FHWA-RD-77-108). The Federal Highway Administration Highway Traffic Noise Prediction Model used in calculating traffic noise emission levels arrives at a predicted noise level through a series of adjustments to a reference sound level per vehicle class; i.e., autos and trucks. The reference level is the L_{eq} or Energy Mean Emission Level. Adjustments are then made to the reference level to account for such variables as traffic flows (per day and nighttime period), speed, percent truck traffic and relative distance. The acoustic environment as determined by the model is then weighted by 10 dBA for nighttime emission levels. Results of the analysis are then specified in terms of Equal L_{dn} Contour Values (expressed as distance to noise contour value in feet from respective roadway centerline).

Contained in the following tables are the highway traffic characteristics used to compute existing and future traffic noise levels within the City of Hemet (Tables P and Q), and the noise contour results, expressed as distance in feet from the centerline of the respective roadway segment to values of $55L_{dn}$, $60L_{dn}$, $65L_{dn}$, and $70L_{dn}$ (Tables R and S).

TABLE P

FREEWAY/ROADWAY CHARACTERISTICS

YEAR 1979

			ADT	PERCENT OF ADT FOR			SPEEDS		
				AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
1	DEVONSHIRE -	CITY BDRY./STATE	2500.	99.0	1.0	0.0	35.	35.	35.
2		STATE/SANTA FE	3000.	99.0	1.0	0.0	30.	30.	30.
3		SANTA FE/CITY BDRY.	1500.	99.0	1.0	0.0	30.	30.	30.
4	LATHAM -	KIRBY/PALM	2500.	99.0	1.0	0.0	35.	35.	35.
5		PALM/GILBERT	3500.	99.0	1.0	0.0	35.	35.	35.
6		GILBERT/STATE	5000.	99.0	1.0	0.0	30.	30.	30.
7		STATE/SAN JACINTO	7000.	99.0	1.0	0.0	30.	30.	30.
8	FLORIDA -	SANDERSON/LYON	16000.	97.0	2.0	1.0	45.	45.	45.
9		LYON/SAN JACINTO	22000.	97.0	2.0	1.0	35.	35.	35.
10		SAN JACINTO/CITY BDRY.	26000.	97.0	2.0	1.0	25.	25.	25.
11	ACACIA -	SANDERSON/LYON	1500.	99.0	1.0	0.0	40.	40.	40.
12		LYON/STATE	3000.	99.0	1.0	0.0	35.	35.	35.
13		STATE/SAN JACINTO	5000.	99.0	1.0	0.0	25.	25.	25.
14	MAYBERRY -	LYON/STATE	1000.	99.0	1.0	0.0	30.	30.	30.
15		STATE/CITY BDRY.	1500.	99.0	1.0	0.0	30.	30.	30.

TABLE P . . . Continued

		ADT	PERCENT OF ADT FOR		AUTO	SPEEDS	
			AUTO	M-TRUCK		M-TRUCK	H-TRUCK
16	WHITTIER - SANDERSON/LYON	100.	99.0	1.0	0.0	35.	35.
17	LYON/STATE	1000.	99.0	1.0	0.0	35.	35.
18	STATE/SAN JACINTO	2000.	99.0	1.0	0.0	35.	35.
19	JOHNSTON - LYON/SAN JACINTO	1000.	99.0	1.0	0.0	35.	35.
20	STETSON - CITY BDY./SANDERSON	3000.	97.0	1.0	2.0	40.	40.
21	SANDERSON/KIRBY	5000.	99.0	1.0	0.0	40.	40.
22	KIRBY/LYON	7000.	99.0	1.0	0.0	40.	40.
23	LYON/STATE	9000.	99.0	1.0	0.0	35.	35.
24	STATE/CITY BDY.	12000.	99.0	1.0	0.0	35.	35.
25	HARRISON - CITY BDY./SANDERSON	100.	99.0	1.0	0.0	40.	40.
26	SANDERSON/LYON	100.	99.0	1.0	0.0	40.	40.
27	PALM/STATE	100.	99.0	1.0	0.0	40.	40.
28	WARREN - CITY BDY./CITY BDY.	2000.	97.0	1.0	2.0	45.	45.
29	CAWSTON - HARRISON/STETSON	100.	99.0	1.0	0.0	30.	30.
30	SANDERSON - CITY BDY./HARRISON	100.	98.0	1.0	1.0	40.	40.

TABLE P . . . Continued

FREEWAY/HIGHWAY CHARACTERISTICS

YEAR 1979

		ADT	PERCENT OF ADT FOR		SPEEDS	
			AUTO	M-TRUCK	M-TRUCK	H-TRUCK
31	HARRISON/STETSON	100.	98.0	1.0	40.	40.
32	STETSON/FLORIDA	4000.	98.0	1.0	40.	40.
33	KIRBY - STETSON/FLORIDA	200.	99.0	1.0	35.	35.
34	FLORIDA/DEVONSHIRE	2500.	99.0	1.0	35.	35.
35	LYON - CITY BDY./STETSON	100.	99.0	1.0	40.	40.
36	STETSON/MAYBERRY	2500.	99.0	1.0	40.	40.
37	MAYBERRY/FLORIDA	6500.	99.0	1.0	35.	35.
38	FLORIDA/DEVONSHIRE	6500.	99.0	1.0	35.	35.
39	DEVONSHIRE/CITY BDY.	5000.	99.0	1.0	35.	35.
40	PALM - HARRISON/STETSON	100.	99.0	1.0	40.	40.
41	STETSON/ACACIA	2500.	99.0	1.0	35.	35.
42	ACACIA/FLORIDA	4000.	99.0	1.0	30.	30.
43	FLORIDA/CITY BDY.	2500.	99.0	1.0	30.	30.
44	GILBERT - STETSON/ACACIA	1000.	99.0	1.0	35.	35.
45	ACACIA/FLORIDA	1500.	99.0	1.0	30.	30.

TABLE P. . . Continued

FREEWAY/ROADWAY CHARACTERISTICS

YEAR 1979

			ADT	PERCENT OF ADT FOR			SPEEDS		
				AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
46		FLORIDA/OAKLAND	1000.	99.0	1.0	0.0	30.	30.	30.
47	STATE	- CITY BDRY./STETSON	100.	99.0	1.0	0.0	35.	35.	35.
48		STETSON/MAYBERRY	6500.	99.0	1.0	0.0	35.	35.	35.
49		MAYBERRY/ACACIA	9000.	99.0	1.0	0.0	30.	30.	30.
50		ACACIA/FLORIDA	7500.	99.0	1.0	0.0	30.	30.	30.
51		FLORIDA/CITY BDRY.	11500.	99.0	1.0	0.0	30.	30.	30.
52	BUENA VISTA-	CITY BDRY./STETSON	100.	99.0	1.0	0.0	35.	35.	35.
53		STETSON/MAYBERRY	2000.	99.0	1.0	0.0	35.	35.	35.
54		MAYBERRY/ACACIA	3500.	99.0	1.0	0.0	30.	30.	30.
55		ACACIA/FLORIDA	4500.	99.0	1.0	0.0	25.	25.	25.
56		FLORIDA/OAKLAND	3000.	99.0	1.0	0.0	25.	25.	25.
57	SANTA FE	- STETSON/MAYBERRY	2500.	99.0	1.0	0.0	35.	35.	35.
58		MAYBERRY/FLORIDA	4500.	99.0	1.0	0.0	25.	25.	25.
59		FLORIDA/DEVONSHIRE	3000.	99.0	1.0	0.0	25.	25.	25.
60	SAN JACINTO-	CITY BDRY./ACACIA	5000.	99.0	1.0	0.0	30.	30.	30.

TABLE P . . . Continued

FREEWAY/ROADWAY CHARACTERISTICS

YEAR 1979

			ADT	PERCENT OF ADT FOR			SPEEDS		
				AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
61		ACACIA/FLORIDA	8000.	99.0	1.0	0.0	30.	30.	30.
62		FLORIDA/OAKLAND	15000.	99.0	1.0	0.0	30.	30.	30.
63	OAKLAND	- CITY BDRY./STATE	1500.	99.0	1.0	0.0	25.	25.	25.
64		STATE/SAN JACINTO	6000.	99.0	1.0	0.0	25.	25.	25.

TABLE Q

FREEWAY/ROADWAY CHARACTERISTICS

YEAR 2000

		ADT	PERCENT OF ADT FOR			SPEEDS		
			AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
1	DEVONSHIRE - CITY BDRY./STATE	16000.	99.0	1.0	0.0	35.	35.	35.
2	STATE/SANTA FE	15000.	99.0	1.0	0.0	30.	30.	30.
3	SANTA FE/CITY BDRY.	15000.	99.0	1.0	0.0	30.	30.	30.
4	LATHAM - KIRBY/PALM	5000.	99.0	1.0	0.0	35.	35.	35.
5	PALM/GILBERT	7000.	99.0	1.0	0.0	35.	35.	35.
6	GILBERT/STATE	10000.	99.0	1.0	0.0	30.	30.	30.
7	STATE/SAN JACINTO	11000.	99.0	1.0	0.0	30.	30.	30.
8	FLORIDA - SANDERSON/LYON	35000.	97.0	2.0	1.0	45.	45.	45.
9	LYON/SAN JACINTO	40000.	97.0	2.0	1.0	35.	35.	35.
10	SAN JACINTO/CITY BDRY.	42000.	97.0	2.0	1.0	25.	25.	25.
11	ACACIA - SANDERSON/LYON	12000.	99.0	1.0	0.0	40.	40.	40.
12	LYON/STATE	14000.	99.0	1.0	0.0	35.	35.	35.
13	STATE/SAN JACINTO	16000.	99.0	1.0	0.0	25.	25.	25.
14	MAYBERRY - LYON/STATE	5000.	99.0	1.0	0.0	30.	30.	30.
15	STATE/CITY BDRY.	6000.	99.0	1.0	0.0	30.	30.	30.

TABLE Q . . . Continued

FREEWAY/ROADWAY CHARACTERISTICS

YEAR 2000

			ADT	PERCENT OF ADT FOR			SPEEDS		
				AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
16	WHITTIER	- SANDERSON/LYON	9000.	99.0	1.0	0.0	35.	35.	35.
17		LYON/STATE	12000.	99.0	1.0	0.0	35.	35.	35.
18		STATE/SAN JACINTO	13000.	99.0	1.0	0.0	35.	35.	35.
19	JOHNSTON	- LYON/SAN JACINTO	5500.	99.0	1.0	0.0	35.	35.	35.
20	STETSON	- CITY BDRY./SANDERSON	30000.	97.0	1.0	2.0	40.	40.	40.
21		SANDERSON/KIRBY	37000.	99.0	1.0	0.0	40.	40.	40.
22		KIRBY/LYON	37000.	99.0	1.0	0.0	40.	40.	40.
23		LYON/STATE	37000.	99.0	1.0	0.0	35.	35.	35.
24		STATE/CITY BDRY.	34000.	99.0	1.0	0.0	35.	35.	35.
25	HARRISON	- CITY BDRY./SANDERSON	16000.	99.0	1.0	0.0	40.	40.	40.
26		SANDERSON/LYON	19000.	99.0	1.0	0.0	40.	40.	40.
27		PALM/STATE	16000.	99.0	1.0	0.0	40.	40.	40.
28	WARREN	- CITY BDRY./CITY BDRY.	10000.	97.0	1.0	2.0	45.	45.	45.
29	CAWSTON	- HARRISON/STETSON	8000.	99.0	1.0	0.0	30.	30.	30.
30	SANDERSON	- CITY BDRY./HARRISON	17000.	98.0	1.0	1.0	40.	40.	40.

TABLE Q . . . Continued

FREEWAY/ROADWAY CHARACTERISTICS

YEAR 2000									
			ADT	PERCENT OF ADT FOR			SPEEDS		
				AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
31		HARRISON/STETSON	26000.	98.0	1.0	1.0	40.	40.	40.
32		STETSON/FLORIDA	22000.	98.0	1.0	1.0	40.	40.	40.
33	KIRBY	- STETSON/FLORIDA	12000.	99.0	1.0	0.0	35.	35.	35.
34		FLORIDA/DEVONSHIRE	12000.	99.0	1.0	0.0	35.	35.	35.
35	LYON	- CITY BDRY./STETSON	12000.	99.0	1.0	0.0	40.	40.	40.
36		STETSON/MAYBERRY	17000.	99.0	1.0	0.0	40.	40.	40.
37		MAYBERRY/FLORIDA	17000.	99.0	1.0	0.0	35.	35.	35.
38		FLORIDA/DEVONSHIRE	12000.	99.0	1.0	0.0	35.	35.	35.
39		DEVONSHIRE/CITY BDRY.	12000.	99.0	1.0	0.0	35.	35.	35.
40	PALM	- HARRISON/STETSON	9000.	99.0	1.0	0.0	40.	40.	40.
41		STETSON/ACACIA	9000.	99.0	1.0	0.0	35.	35.	35.
42		ACACIA/FLORIDA	8000.	99.0	1.0	0.0	30.	30.	30.
43		FLORIDA/CITY BDRY.	8000.	99.0	1.0	0.0	30.	30.	30.
44	GILBERT	- STETSON/ACACIA	10000.	99.0	1.0	0.0	35.	35.	35.
45		ACACIA/FLORIDA	10000.	99.0	1.0	0.0	30.	30.	30.

TABLE Q . . . Continued

FREEWAY/ROADWAY CHARACTERISTICS

YEAR 2000

			ADT	PERCENT OF ADT FOR			SPEEDS		
				AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
46		FLORIDA/OAKLAND	8000.	99.0	1.0	0.0	30.	30.	30.
47	STATE	- CITY BDRY./STETSON	19000.	99.0	1.0	0.0	35.	35.	35.
48		STETSON/MAYBERRY	20000.	99.0	1.0	0.0	35.	35.	35.
49		MAYBERRY/ACACIA	23000.	99.0	1.0	0.0	30.	30.	30.
50		ACACIA/FLORIDA	23000.	99.0	1.0	0.0	30.	30.	30.
51		FLORIDA/CITY BDRY.	25000.	99.0	1.0	0.0	30.	30.	30.
52	BUENA VISTA-	CITY BDRY./STETSON	3000.	99.0	1.0	0.0	35.	35.	35.
53		STETSON/MAYBERRY	9000.	99.0	1.0	0.0	35.	35.	35.
54		MAYBERRY/ACACIA	9000.	99.0	1.0	0.0	30.	30.	30.
55		ACACIA/FLORIDA	10000.	99.0	1.0	0.0	25.	25.	25.
56		FLORIDA/OAKLAND	9000.	99.0	1.0	0.0	25.	25.	25.
57	SANTA FE	- STETSON/MAYBERRY	9000.	99.0	1.0	0.0	35.	35.	35.
58		MAYBERRY/FLORIDA	9500.	99.0	1.0	0.0	25.	25.	25.
59		FLORIDA/DEVONSHIRE	10000.	99.0	1.0	0.0	25.	25.	25.
60	SAN JACINTO-	CITY BDRY./ACACIA	17000.	99.0	1.0	0.0	30.	30.	30.

TABLE Q. . . Continued

FREEWAY/ROADWAY CHARACTERISTICS

			YEAR 2000						
			ADT	PERCENT OF ADT FOR			SPEEDS		
				AUTO	M-TRUCK	H-TRUCK	AUTO	M-TRUCK	H-TRUCK
61		ACACIA/FLORIDA	20000.	99.0	1.0	0.0	30.	30.	30.
62		FLORIDA/OAKLAND	25000.	99.0	1.0	0.0	30.	30.	30.
63	OAKLAND	- CITY BDY./STATE	7000.	99.0	1.0	0.0	25.	25.	25.
64		STATE/SAN JACINTO	11000.	99.0	1.0	0.0	25.	25.	25.

TABLE R

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 1979 (LDN)			
		55 DBA	60 DBA	65 DBA	70 DBA
1	DEVONSHIRE - CITY BDRY./STATE	56.	26.	12.	6.
2	STATE/SANTA FE	47.	22.	10.	5.
3	SANTA FE/CITY BDRY.	30.	14.	6.	3.
4	LATHAM - KIRBY/PALM	56.	26.	12.	6.
5	PALM/GILBERT	70.	32.	15.	7.
6	GILBERT/STATE	67.	31.	14.	7.
7	STATE/SAN JACINTO	83.	39.	18.	8.
8	FLORIDA - SANDERSON/LYON	390.	181.	84.	39.
9	LYON/SAN JACINTO	324.	150.	70.	32.
10	SAN JACINTO/CITY BDRY.	218.	101.	47.	22.
11	ACACIA - SANDERSON/LYON	51.	23.	11.	5.
12	LYON/STATE	63.	29.	14.	6.
13	STATE/SAN JACINTO	48.	22.	10.	5.
14	MAYBERRY - LYON/STATE	23.	11.	5.	2.
15	STATE/CITY BDRY.	30.	14.	6.	3.

TABLE R . . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 1979 (LDN)			
		55 DBA	60 DBA	65 DBA	70 DBA
16	WHITTIER - SANDERSON/LYON	7.	3.	1.	1.
17	LYON/STATE	30.	14.	7.	3.
18	STATE/SAN JACINTO	48.	22.	10.	5.
19	JOHNSTON - LYON/SAN JACINTO	30.	14.	7.	3.
20	STETSON - CITY BDRY./SANDERSON	119.	55.	26.	12.
21	SANDERSON/KIRBY	113.	52.	24.	11.
22	KIRBY/LYON	141.	65.	30.	14.
23	LYON/STATE	131.	61.	28.	13.
24	STATE/CITY BDRY.	158.	73.	34.	16.
25	HARRISON - CITY BDRY./SANDERSON	8.	4.	2.	1.
26	SANDERSON/LYON	8.	4.	2.	1.
27	PALM/STATE	8.	4.	2.	1.
28	WARREN - CITY BDRY./CITY BDRY.	108.	50.	23.	11.
29	CAWSTON - HARRISON/STETSON	5.	2.	1.	0.
30	SANDERSON - CITY BDRY./HARRISON	10.	5.	2.	1.

TABLE R . . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 1979 (LDN)			
		55 DBA	60 DBA	65 DBA	70 DBA
31	HARRISON/STETSON	10.	5.	2.	1.
32	STETSON/FLORIDA	122.	56.	26.	12.
33	KIRBY - STETSON/FLORIDA	10.	5.	2.	1.
34	FLORIDA/DEVONSHIRE	56.	26.	12.	6.
35	LYON - CITY BDRY./STETSON	8.	4.	2.	1.
36	STETSON/MAYBERRY	71.	33.	15.	7.
37	MAYBERRY/FLORIDA	105.	49.	23.	11.
38	FLORIDA/DEVONSHIRE	105.	49.	23.	11.
39	DEVONSHIRE/CITY BDRY.	88.	41.	19.	9.
40	PALM - HARRISON/STETSON	8.	4.	2.	1.
41	STETSON/ACACIA	56.	26.	12.	6.
42	ACACIA/FLORIDA	57.	27.	12.	6.
43	FLORIDA/CITY BDRY.	42.	19.	9.	4.
44	GILBERT - STETSON/ACACIA	30.	14.	7.	3.
45	ACACIA/FLORIDA	30.	14.	6.	3.

TABLE R. . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

			YEAR 1979 (LDN)			
			55 DBA	60 DBA	65 DBA	70 DBA
46		FLORIDA/OAKLAND	23.	11.	5.	2.
47	STATE	- CITY BDRY./STETSON	7.	3.	1.	1.
48		STETSON/MAYBERRY	105.	49.	23.	11.
49		MAYBERRY/ACACIA	98.	46.	21.	10.
50		ACACIA/FLORIDA	87.	40.	19.	9.
51		FLORIDA/CITY BDRY.	116.	54.	25.	12.
52	BUENA VISTA-	CITY BDRY./STETSON	7.	3.	1.	1.
53		STETSON/MAYBERRY	48.	22.	10.	5.
54		MAYBERRY/ACACIA	52.	24.	11.	5.
55		ACACIA/FLORIDA	44.	21.	10.	4.
56		FLORIDA/OAKLAND	34.	16.	7.	3.
57	SANTA FE	- STETSON/MAYBERRY	56.	26.	12.	6.
58		MAYBERRY/FLORIDA	44.	21.	10.	4.
59		FLORIDA/DEVONSHIRE	34.	16.	7.	3.
60	SAN JACINTO-	CITY BDRY./ACACIA	67.	31.	14.	7.

TABLE R . . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 1979 (LDN)			
		55 DBA	60 DBA	65 DBA	70 DBA
61	ACACIA/FLORIDA	91.	42.	20.	9.
62	FLORIDA/OAKLAND	138.	64.	30.	14.
63	OAKLAND - CITY BDY./STATE	21.	10.	5.	2.
64	STATE/SAN JACINTO	54.	25.	12.	5.

TABLE S

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 2000 (LDN)			
		55 DBA	60 DBA	65 DBA	70 DBA
1	DEVONSHIRE - CITY BDRY./STATE	192.	89.	41.	19.
2	STATE/SANTA FE	138.	64.	30.	14.
3	SANTA FE/CITY BDRY.	138.	64.	30.	14.
4	LATHAM - KIRBY/PALM	88.	41.	19.	9.
5	PALM/GILBERT	110.	51.	24.	11.
6	GILBERT/STATE	106.	49.	23.	11.
7	STATE/SAN JACINTO	113.	52.	24.	11.
8	FLORIDA - SANDERSON/LYON	657.	305.	141.	66.
9	LYON/SAN JACINTO	483.	224.	104.	48.
10	SAN JACINTO/CITY BDRY.	300.	139.	65.	30.
11	ACACIA - SANDERSON/LYON	202.	94.	44.	20.
12	LYON/STATE	175.	81.	38.	18.
13	STATE/SAN JACINTO	104.	48.	22.	10.
14	MAYBERRY - LYON/STATE	67.	31.	14.	7.
15	STATE/CITY BDRY.	75.	35.	16.	8.

TABLE S . . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 2000 (LOW)			
		55 DBA	60 DBA	65 DBA	70 DBA
16	WHITTIER - SANDERSON/LYON	131.	61.	28.	13.
17	LYON/STATE	158.	73.	34.	16.
18	STATE/SAN JACINTO	167.	77.	36.	17.
19	JOHNSTON - LYON/SAN JACINTO	94.	44.	20.	9.
20	STETSON - CITY BDRY./SANDERSON	552.	256.	119.	55.
21	SANDERSON/KIRBY	428.	199.	92.	43.
22	KIRBY/LYON	428.	199.	92.	43.
23	LYON/STATE	335.	156.	72.	34.
24	STATE/CITY BDRY.	317.	147.	68.	32.
25	HARRISON - CITY BDRY./SANDERSON	245.	114.	53.	24.
26	SANDERSON/LYON	274.	127.	59.	27.
27	PALM/STATE	245.	114.	53.	24.
28	WARREN - CITY BDRY./CITY BDRY.	315.	146.	68.	31.
29	CAWSTON - HARRISON/STETSON	91.	42.	20.	9.
30	SANDERSON - CITY BDRY./HARRISON	319.	148.	69.	32.

TABLE S . . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

			YEAR 2000 (LDN)			
			55 DBA	60 DBA	65 DBA	70 DBA
31		HARRISON/STETSON	424.	197.	91.	42.
32		STETSON/FLORIDA	379.	176.	82.	38.
33	KIRBY	- STETSON/FLORIDA	158.	73.	34.	16.
34		FLORIDA/DEVONSHIRE	158.	73.	34.	16.
35	LYON	- CITY BDRY./STETSON	202.	94.	44.	20.
36		STETSON/MAYBERRY	255.	118.	55.	25.
37		MAYBERRY/FLORIDA	200.	93.	43.	20.
38		FLORIDA/DEVONSHIRE	158.	73.	34.	16.
39		DEVONSHIRE/CITY BDRY.	158.	73.	34.	16.
40	PALM	- HARRISON/STETSON	167.	77.	36.	17.
41		STETSON/ACACIA	131.	61.	28.	13.
42		ACACIA/FLORIDA	91.	42.	20.	9.
43		FLORIDA/CITY BDRY.	91.	42.	20.	9.
44	GILBERT	- STETSON/ACACIA	140.	65.	30.	14.
45		ACACIA/FLORIDA	106.	49.	23.	11.

TABLE S . . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 2000 (LDN)			
		55 DBA	60 DBA	65 DBA	70 DBA
46	FLORIDA/OAKLAND	91.	42.	20.	9.
47	STATE - CITY BDRY./STETSON	215.	100.	46.	21.
48	STETSON/MAYBERRY	222.	103.	48.	22.
49	MAYBERRY/ACACIA	184.	85.	40.	18.
50	ACACIA/FLORIDA	184.	85.	40.	18.
51	FLORIDA/CITY BDRY.	195.	90.	42.	19.
52	BUENA VISTA- CITY BDRY./STETSON	63.	29.	14.	6.
53	STETSON/MAYBERRY	131.	61.	28.	13.
54	MAYBERRY/ACACIA	98.	46.	21.	10.
55	ACACIA/FLORIDA	76.	35.	16.	8.
56	FLORIDA/OAKLAND	71.	33.	15.	7.
57	SANTA FE - STETSON/MAYBERRY	131.	61.	28.	13.
58	MAYBERRY/FLORIDA	73.	34.	16.	7.
59	FLORIDA/DEVONSHIRE	76.	35.	16.	8.
60	SAN JACINTO- CITY BDRY./ACACIA	150.	70.	32.	15.

TABLE S . . . Continued

DISTANCE TO NOISE CONTOURS EXPRESSED
IN FEET FROM CENTER LINE OF ROADWAY

		YEAR 2000 (LON)			
		55 DBA	60 DBA	65 DBA	70 DBA
61	ACACIA/FLORIDA	168.	78.	36.	17.
62	FLORIDA/OAKLAND	195.	90.	42.	19.
63	OAKLAND - CITY BDY./STATE	60.	28.	13.	6.
64	STATE/SAN JACINTO	81.	37.	17.	8.

SEISMIC AND PUBLIC SAFETY ELEMENT
CITY OF HEMET

ADOPTED - June 22, 1982

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I N T R O D U C T I O N

INTRODUCTION

This edition of the Seismic and Public Safety Element is based on the original version, entitled "Seismic Safety and Public Safety General Plan Elements," prepared by Envicom Corporation and adopted by the Hemet City Council on May 11, 1976. This update follows a recommendation of the 1976 plan to review and revise the Element every five years. As suggested in the General Plan Guidelines, published by the Office of Planning and Research, the required elements of Seismic Safety and Public Safety are combined and synthesized both in content and organization in this update. This revision takes into account certain revisions, applicable to the Hemet area, to the County of Riverside's Geotechnical Report.

Legislative Authority

The California State Legislature, through requirements of the Seismic Safety and Public Safety Element, has placed specific responsibilities on local government for identification and evaluation of natural hazards and formation of programs and regulations to reduce the risk of natural hazards. Specific authority is derived from Government Code Sections 65302(f) and 65302.1 which require Seismic Safety and Public Safety Elements of all city and county general plans, as follows:

"A Seismic Safety Element consisting of an identification and appraisal of seismic hazards such as susceptibility to surface ruptures from faulting, to ground shaking, to ground failures, or to the effects of seismically induced waves such as tsunamis and seiches."

"The Seismic Safety Element shall also include an appraisal of mudslides, landslides, and slope stability as necessary geologic hazards that must be considered simultaneously with other hazards such as possible surface ruptures from faulting, ground shaking, ground failure, and seismically induced waves." (Section 65302(f))

"A Safety Element for the protection of the community from fires and geologic hazards including features necessary for such protection as evacuation routes, peak load water supply requirements, minimum road widths, clearances around structures, and geologic hazard mapping in areas of known geologic hazards." (Section 65302.1)

The effect of these sections is to require cities and counties to take seismic and other natural hazards into account in their planning programs. The principal catalyst for these requirements was the February 9, 1971 San Fernando earthquake in which 65 people were killed and property damage exceeded the billion dollar mark. Conclusions from the 1973 Urban Geology Master Plan for California also give cause for considering geologic hazards in the planning process. Summary conclusions from this study estimate dollar losses due to geologic hazards in California between 1970 and 2000 will amount to more than \$55 billion.

Purpose and Approach

The basic objectives of the Seismic and Public Safety Element are to identify and evaluate natural hazards confronting cities and counties and to recommend policies that would reduce the adverse impact of those hazards if they are realized. Specifically, this element evaluates both primary and secondary seismic, geologic, and fire hazards. The intent of the recommended policies is to provide an opportunity to reduce the loss of life, property damage, and social and economic dislocations in the event of a major earthquake, flood, or fire.

The purpose of this document is to serve as an official guide to the City Council, the Planning Commission and other governmental bodies, citizens, and private organizations concerned with natural hazards in the City of Hemet. The Seismic and Public Safety Element is intended to establish uniformity of policy and direction within the City government to minimize the risk from seismic events and other natural hazards. This Element includes goals, policies and specific actions as a basis for decision-making in public and private development matters. Such information is to be used in conjunction with other established City policies contained in the General Plan, and should play a major role in determining future land use.

The Seismic and Public Safety Element is intended to implement the County of Riverside Geotechnical Report, which contains a detailed analysis of seismic, flood, and inundation hazards for the City of Hemet as well as the entire County of Riverside. There will be a need to update the Geotechnical Report frequently due to the ongoing emergence of new scientific data. Therefore, the Geotechnical Report will be maintained as a resource background document to support this policy report. Only the policy report will be adopted by resolution by the City of Hemet City Council to avoid frequent General Plan amendments to the Geotechnical Report.

It should be noted that the sciences of seismology and fire ecology are relatively young and that much remains to be learned. The basic philosophy under which this document was prepared is

that we should incorporate natural hazards analysis into the planning process based on what we know today, rather than waiting until we know all that we would like to know.

This Element contains a discussion of risk determination, hazard reduction, seismic and geologic hazards, and fire hazards and protection. In conclusion, the way this element relates to other General Plan Elements is presented as required by the State guidelines.

I I

R I S K

D E T E R M I N A T I O N

RISK DETERMINATION

Introduction

The determination of "acceptable risk" is at once both simple and exceedingly complex. The Council on Intergovernmental Relations (CIR) defined three categories of "risk" from natural and man-made hazards.¹

- 1) Acceptable Risk: The level of risk below which no specific action by government is deemed to be necessary.
- 2) Unacceptable Risk: The level of risk above which specific action by government is deemed to be necessary to protect life and property.
- 3) Avoidable Risk: A risk which need not be taken because individual or public goals can be achieved at the same, or less, total "cost" by other means without taking the risk.

These somewhat simplistic definitions mask the problem of determining how many deaths, injuries, and dollars lost, are "acceptable" to a community. A somewhat different approach, implied by the California Legislature's Joint Committee on Seismic Safety, provides the basic rationale for risk determination as used here. The basic conclusions arrived at by this Committee in their Final Report² include:

- 1) there is no uniform level of risk acceptable to public;
- 2) maximum safety is desirable;
- 3) demands for increased safety must be related to costs;
- 4) these demands vary with time, place, occupation, culture, and other factors, including subjective feelings, emotional reactions, and irrational consideration;
- 5) reduced risk is attainable at a cost with present technology.

It is acknowledged that a hazard-free environment is an impossibility. Natural hazards, in the absence of development, generally pose only limited danger to man. With the introduction of man-made structures and facilities existing natural "hazards" become "risks". In an attempt to minimize these risks, various codes and ordinances have been adopted, including health and building codes, which generally define what is unsafe. While some unsafe

¹Council on Intergovernmental Relations, General Plan Guidelines, Sacramento, Sept., 1973, page IV-26.

²Joint Committee on Seismic Safety, Calif. Legislature, Meeting the Earthquake Challenge--Final Report, Sacramento, 1974, pp. 179-180.

conditions exist because of limited technology, resources, or different priority, it does not necessarily mean that these risks are acceptable. They must be tolerated, however, until improved technology, additional resources, or reordered priorities permit their reduction. In this sense, "acceptable risk" is that which cannot, for a variety of reasons, currently be reduced. It should be apparent that what is determined to be "acceptable" changes as technology, resources, and priorities change.

There are three basic tenets upon which a modified risk determination of "unacceptable risk", is based. First, no perceivable risk is "acceptable", only tolerated. Second, in light of limited resources and technology, some risk must always be tolerated. Third, criteria can be selected with which to identify risks that are unacceptable. Based on this line of reasoning, the following definitions are in order:

- 1) Tolerated Risk: Risks to life and property that are not currently being reduced due to technological limitations, limited resources, or existing priorities.
- 2) Unacceptable Risk: Risks to life and property that must be reduced by on-going government and private action programs.

Determination Process

The determination of what constitutes "unacceptable risk" involves the appraisal of: 1) the degree to which the risk is perceived, 2) the probability of the event, 3) potential severity of losses, and 4) the ability to reduce the risk.

Risk Perception. The extent to which the community and decision-makers perceive both the hazard and their capability to alter its potential effects influences the level of commitment to risk reduction. Risk perception is influenced by the recency of the event as well as how frequent the event occurs.

Probability of Event. A central concept in determining risk is the definition of hazardous natural events in terms of magnitude and frequency. The magnitude of an event refers to its size. Examples are the height of flood waters, the rating of an earthquake on the Richter scale, or the number of acres burned in a wildland fire. The frequency of an event refers to the number of times it occurs during a certain period of time. Usually, the less often an event occurs, the greater is its size and potential impact. For example, rainstorms occur annually in the County, but most often they are of low magnitude. However, on relatively infrequent occasions, as in January of 1969 and February of 1980, a storm of great magnitude will occur and result in destructive flooding.

The magnitude-frequency concept is important in decisions about risk in that a judgement must be made regarding what magnitude event should be planned for. The judgement is based on the frequency or "recurrence interval" of the hazardous event. For example, by compiling and evaluating information on past flooding, the level of flooding an area can expect to experience every 50 years, 100 years, etc. can be determined. Similarly, by studying the area's earthquake history, determinations can also be made regarding the magnitude of earthquakes that can be expected at various intervals. A description of the magnitude and other characteristics of the event are then developed through a technical analysis. This information allows planners and engineers to develop loss-reduction programs that reduce or eliminate unacceptable risk.

Flood control works can be designed based on the characteristics of the 100-year hazardous flood from such information. In a like manner, building standards can be adopted that would minimize the effects of a 50 to 100 year earthquake. Where a higher level of protection is desired, such as for hospitals, the City's structural engineer may determine that design levels should be increased from the Uniform Building Code to protect against earthquake or other natural hazards with longer recurrence intervals. In this sense, the magnitude earthquake or flood event used to determine risk may be thought of as a "design earthquake" or "design flood."

On May 9, 1976, technical representatives and elected officials from all participating jurisdictions in Riverside County met with ENVICOM Corporation. The purpose of the meeting was to determine the earthquake magnitude to be assigned to each of the three major faults in evaluating expected earthquake shaking. This conference selected the magnitude and recurrence intervals shown in Table 1.

Table 1
SUMMARY OF EXPECTED EARTHQUAKE MAGNITUDES
AND ACCEPTABLE RISK FOR FOUR USE CATEGORIES

Use Category by Rank of Importance**	Recurrence Interval in Years	Earthquake Magnitude on the Richter Scale		
		San Andreas	San Jacinto	Elsinore
A	Max.Credible	8.0*	7.5*	7.0*
B	200-500	7.5*	7.0*	6.0*
C	100-200	7.0*	6.5*	5.5
D	50-100	6.5*	6.0	5.0

* Probably accompanied by fault rupture to surface.

** Uses are defined in Table 2.

SOURCE: Riverside County, Seismic Safety/Safety Element
Technical Report, Volume 1, Sept., 1976, page 61.

Severity of Potential Losses. The risk of damage or loss of life is more complex and involves evaluating and combining, with risk of occurrence, the risk of severe damage or collapse of a structure and the probability of certain occupancies. Potentially-damaging natural hazards interact with man-made structures. If a structure is unable to accommodate the natural event, failure will occur. The potential for such failure is termed a structural hazard and includes not only structures, but also, the potential for damage or injury that could occur as the result of movement of loose or inadequately restrained objects within, on, or adjacent to a structure.

The determination of unacceptable risk from hazardous events also involves separating structures into categories according to their potential effect on loss of life and injury and their importance in terms of continued community functioning. In the hours immediately following the 1971 San Fernando earthquake, emergency services were impaired by damage to such essential structures and facilities as police and fire stations, communications networks, and utility lines. Several hospitals were seriously damaged and unable to continue functioning. These and other similar facilities are vital to the community's ability to respond to a major disaster and to minimize loss of life and property. The experience in San Fernando emphasized the need to provide these "critical or essential facilities" with a higher level of protection from earthquakes than "limited" or "normal" occupancy structures or other non-critical structures. As a minimum, all structures which could have an effect on the loss of life should be designed to remain standing in the event of a major natural disaster even if rendered useless. Critical facilities, on the other hand, should not only remain standing, but should be able to continue providing essential services in the event of a disaster. The classification of uses and facilities and acceptable seismic events for the Hemet area as illustrated in Table 2 is to be used as a guide in evaluating the importance of each facility relative to overall public safety.

In addition, Table 2 ranks the relative importance of the use categories. These are ranked according to the potential loss of life, need for disaster response, and need as an essential community function. The first category, Critical, includes uses whose collapse poses extreme, if not catastrophic hazards to life, property, and community functioning. Collapse of these structures or facilities is clearly unacceptable and the highest level of safety is mandatory. The second category, Essential, includes uses whose collapse could severely impair the community's ability to recover from a natural disaster. It is recognized that there may be some temporary service disruptions because of damage to individual facilities, however, these should not impair the community's recovery effort since delivery systems as a whole can continue supplying essential services. The third category, Normal-High Risk, includes structures or facilities which because of emotional reasons, high

Table 2
ACCEPTABLE RISK SEISMIC EVENTS FOR HEMET AREA

Land Use Group	Facility Type	Facility	Appropriate Recurrence Interval (Years)	Magnitude By fault San Jacinto
A	Critical Emergency Services	Hospitals, Fire Station, Police Stations, CD HQ, EDC's Lifeline - Gas Electric, Water, Ambulance Services, Emergency Broadcast Systems, Lifeline Telephone Systems, Power Plants (Nuclear, Fossil Fuel), Dams, Reservoirs, explosives or hazardous materials manufacturing, handling or storage	Maximum Credible	7.5
B	Essential Facilities	Schools, Theaters, Auditoriums, Utility Substations, Sewage Treatment Plants, Waterworks, Local Gas and Electric Lines, Major Highways, Bridges, Tunnels, Aqueducts, Pipelines, Public Service Facilities, Public Assembly w/ Capacity of 100 or more, Power Plants	200-500	7.0
C	Normal-high Risk Facilities	Heavy Industrial, Office Buildings, 100-200 Commercial Centers, Hotels and Motels, Parks and Financial Residential, Public Service Stations, Health Care Clinics, Convalescent Homes	100-200	6.5
D	Normal-low Risk Facilities	Light Industrial, Low Density, Residential, Warehousing and Storage, Agricultural, Parks, Convenience Centers, Small Hotels, Motels	50-100	6.0

occupancy, or potential use in disaster response operations, should not collapse and should afford occupants a high level of safety. It is recognized that some damage, including structural and injury may occur, but loss of life would be rare. Design standards should minimize the possibility of structural collapse. The fourth category, Normal-Low Risk, includes the vast majority of structures. The criteria advanced by the Structural Engineers Association of California for "ordinary" risk structures are:

- 1) resist minor earthquakes without damage;
- 2) resist moderate earthquakes without structural damage, but with some nonstructural damage;
- 3) resist major earthquakes of the intensity or severity of the strongest experienced in California, without collapse, but with some structural as well as nonstructural damage;
- 4) in most structures it is expected that structural damage, even in a major earthquake, could be limited to repairable damage.

Capability to Reduce Risk. The technological ability to reduce risks must be assessed as well as available fiscal and manpower resources be made priorities for their immediate allocation. The determination that the failure, or loss of function, of certain structures or facilities is not acceptable will likely require both a reordering of priorities and additional resources.

I I I

H A Z A R D

R E D U C T I O N

G O A L S A N D P O L I C I E S

HAZARD REDUCTION: GOALS AND POLICIES

Introduction

This section is intended to bring into focus the various steps the City of Hemet should initiate and the different programs and actions that need to be maintained in order to reduce natural hazards. Conclusions drawn upon are based on the information presented in the following sections. Since the City has been following many of the recommendations of the 1976 Seismic Safety and Public Safety Elements, they are restated here to prevent losing sight of them. In some cases, the City has fulfilled the intent of a policy and it is no longer necessary to mention it. However, it should be pointed out that the 1976 element, particularly the plates in the County technical report, should be consulted to gain a more complete perspective on the progress of hazard reduction in the Hemet area. This section presents a statement of goals, policies, and specific actions required to implement the Element's goals and policies and a discussion of disaster preparedness and emergency services.

Goals for Hazard Reduction

To plan effectively for reducing hazards to acceptable levels of risk it is necessary that goals be set and adhered to. They should be modified as needs change and concepts of "acceptable" levels of risk change. As used here, the goals address general policy directions which form the basis for planning decisions and actions. The following are goals for hazard reduction in the City of Hemet:

- 1) To minimize injury and the loss of life from fire and natural hazards.
- 2) To minimize social and economic dislocations resulting from fire and natural hazards.
- 3) To minimize damage to public and private property resulting from fire and natural hazards.
- 4) To provide for the rapid restoration of services following a major disaster.

Policies

The following policies complement the planning goals and define specific directions for the City to take in reducing fire and natural hazards:

- a) Provide for the identification and evaluation of existing structural hazards, as well as hazards in transportation networks and water supply systems.
- b) Provide for orderly hazard reduction programs to reduce risks associated with hazardous structures to acceptable levels.
- c) Promote and encourage the development of more detailed scientific analyses of natural hazards in the Hemet area, such as, faults, fault zones, areas subject to subsidence, and areas of slope instability.
- d) Provide for the education of the community regarding the nature and extent of natural hazards such as, fires, floods, and earthquakes.
- e) Continue to condition new developments as a response to potential natural hazards.
- f) Provide for the periodic review and updating of this Element.
- g) Provide for the maintenance and upgrading of disaster response plans.
- h) Undertake the preparation and ultimate adoption of a Master Drainage and Flood Control Element of the General Plan.
- i) Require incremental storm runoff resulting from new construction to be impounded on site. (This is considered an interim policy dependent on completion of "h" above).
- j) Ensure that new development in a federally designated floodway or floodplain will provide for the mitigation of any potential flood damage.
- k) Ensure that fire stations and other emergency facilities are provided in any large scale development where such facilities are warranted to retain an overall five minute response time.
- l) Coordinate with the County of Riverside and the State Department of Forestry to establish a Cooperative Fire Combat Training Center.

Specific Actions

The implementation of the following specific actions, on the part of the City, are deemed necessary to the fulfillment of the above stated goals and the carrying out of the above policies.

Building Codes and Inspections. Presently, the City requires soils engineering and geological engineering investigations in areas of moderate and high landslide risk and in potential liquefaction and subsidence areas. To insure adequate review and full use of investigation reports, the City should, when necessary, retain a part-time engineering geologist-consultant. In addition, the City should amend Chapter 23, Section 2314 (Earthquake Regulations) of the Uniform Building Code to account for the

expected maximum ground accelerations of the recommended design earthquakes. Amending section 2314 involves revising the basic lateral force equation in the section, and requires analysis by a qualified structural engineer. The intent of the revisions is to reflect the levels of acceptable risk adopted in this Element.

Structures within the study area of this report will be inspected for conformance with the amended Uniform Building Code earthquake regulations. Inspections will be conducted according to the following priorities:

- 1) emergency service facilities (e.g., fire and police stations, hospitals, disaster centers, communication centers).
- 2) other critical facilities (e.g., schools, utility and water lines, government buildings).
- 3) high occupancy non-critical facilities (e.g., dormitories and apartments).
- 4) normal or limited occupancy non-critical facilities (e.g., offices, low density residential structures).

Within each priority group, the facilities built before 1933 will be inspected first, then those built between 1933 and 1948, and lastly, those constructed after 1948. The significance of the year 1933 is that the Field and Riley Acts became law in California that year and required reinforcement in schools and certain other structures (see Appendix B). Structures built before 1933, especially larger commercial structures, are more likely to be unreinforced masonry block buildings which are most susceptible to collapse in earthquakes. In 1948, earthquake regulations were adopted as a legally binding section of the UBC for the first time. Previously, earthquake standards were set forth in the Appendix of the UBC and were not a mandated part of the Code. It is more likely, then, that a building constructed before 1948 would be less able to withstand the shock of an earthquake than one built after 1948. Public structures should be inspected before private structures.

Table 3 (abridged from Pacific Fire Rating Bureau) will be used as a general indicator in older construction for use in establishing a priority ranking system for evaluating structures. Buildings with a high susceptibility to damage rating (five or over) will be selected for structural inspection before those with low ratings. A high priority will be placed on establishing a definition of facilities that handle explosive, flammable, or toxic materials and on an evaluation of their seismic vulnerability.

Caltrans will be requested to review its facilities and roadways within the study area to determine the potential impact of expected earthquakes and to forward comments to the City.

Table 3

HAZARD COMPARISON OF NON-EARTHQUAKE-RESISTIVE BUILDINGS

Simplified Description of Structural Type	Relative Damagability (in order of increasing susceptibility to damage)
Small wood-frame structures, i.e. dwellings not over 3,000 sq. ft. and not over 3 stories	1
Single or multistory steel-frame buildings with concrete exterior walls, concrete floors, and concrete roof. Moderate wall openings	1.5
Single or multistory reinforced-concrete buildings with concrete exterior walls, concrete walls, and concrete roof. Moderate wall openings	2
Large area wood-frame buildings and other wood frame buildings	3 to 4
Single or multistory steel-frame buildings with unreinforced masonry exterior wall panels; concrete floors and concrete roof	4
Single or multistory reinforced-concrete frame buildings with unreinforced masonry exterior wall panels, concrete floors and concrete roof	5
Reinforced concrete bearing walls with supported floors and roof of any material (usually wood)	5
Buildings with unreinforced brick masonry having sand-line mortar; and with supported floors and roof of any material (usually wood)	7 up
Bearing walls of unreinforced adobe, unreinforced hollow concrete block, or unreinforced hollow clay tile	Collapse hazard in moderate shocks
<p>This table is intended for buildings not containing earthquake bracing, and in general, is applicable to most older construction. Unfavorable foundation conditions and/or dangerous roof tanks can increase the earthquake hazard greatly.</p> <p>Source: Envicom, 1976</p>	

Hazards will be identified and plans for reduction of hazards will be requested by the City. The Circulation Element of the General Plan and potential evacuation routes will be reviewed and updated as necessary.

The Atchison, Topeka & Santa Fe Railway Company will be requested to review its lines and yards within the study area to determine the potential impact of the expected earthquakes and to forward comments to the City. Hazards will be identified and plans for reduction of hazards will be requested by the City.

The City of Hemet will request the California State Division of Dam Safety to require the owners of any existing dams adjacent to the City to inspect their dams using the seismic response spectra as guidelines to determine these structure's ability to withstand expected earthquakes.

The Southern California Gas Company and the Edison Company will be requested to inspect their facilities and distribution/transformation networks and centers to determine the potential impact of expected earthquakes and to forward comments to the City. Hazards will be identified and plans for reduction of hazards will be requested by the City. These utilities should also review their gas and power lines for potential fire hazards in the event of an earthquake. Contingency plans will be formulated to provide for the restoration of power in the event of a major disaster.

The Eastern Municipal Water District and the Lake Hemet Municipal Water District will be requested to inspect their facilities and distribution network to determine the potential impact of expected earthquakes and to forward comments to the City. Hazards will be identified and plans for reduction of hazards will be requested by the City. Contingency plans will be formulated to provide for the restoration of water in the event of a major disaster.

Hazardous Structures. Structures identified as not conforming to amended earthquake standards or as hazardous in terms of fire or flooding will be brought into conformance with acceptable levels of risk by programs including, but not limited to, structural rehabilitation, occupancy reduction, and demolition and reconstruction. The City will develop standards that will enable critical and essential structures or facilities to remain functional.

The City will review and consider the desirability of initiating condemnation proceedings against structures found to be unsafe. The City will advocate the expansion of State and Federal relocation assistance funds and programs to aid persons and businesses displaced from hazardous buildings. The need to replace or upgrade public buildings should be reflected in capital improvement programs and plans for the affected agencies.

Research and Plan Review. The City will encourage and support further detailed field study of the San Jacinto Fault Hazard Management Zone, including sub-surface trenching to provide a more refined evaluation of the surface rupture potential of the fault. Such studies may be undertaken by local government, private enterprise, or institutions of higher learning and research. In any case, the staff geologist of the County Planning Department will be notified in advance of subsurface work to secure his evaluation of fault activity and location during the trenching phase when feasible.

The City will also require site-by-site soils and geologic engineering studies for proposed development projects in areas of moderate to high landslide risk to assess natural and graded slope stability. Slope stability calculations will incorporate the ground shaking parameters presented in the County technical Report on seismic safety and safety. In addition, the City will require site-by-site soils and geologic engineering studies in areas of potential settlement and evaluate these potential hazards using the ground shaking parameters presented in the County technical report. The City will institute a building strong-motion instrumentation program for buildings over four stories in height, if such buildings are anticipated.

The City will encourage the completion of flood control studies and projects that would serve to mitigate flood hazards that may effect the City. This would include the completion and implementation of the Master Drainage and Flood Control Element of the General Plan.

Upon adoption of the Seismic Safety and Safety Element, the City administrative staff will oversee the implementation of the Element and advise the Council of implementation progress. This Element will be reviewed by the City of Hemet Department of Community Development annually and will be comprehensively revised every five years, or whenever substantially new scientific evidence becomes available.

Land Use Regulations. No development will be permitted in the San Jacinto Fault Hazard Management Zone until the developer provides a detailed geological evaluation of the surface rupture potential of the fault and adequate building setbacks from the Fault are established. The Alquist-Priolo Act requires that all building setbacks be evaluated and that geologic guidelines be established for construction adjacent to active faults, as set forth in the Special Studies Zone.

No development will be permitted in any seismic zone unless it conforms to the revised Uniform Building Code Earthquake Regulations. All emergency and critical facilities will be designed to withstand the maximum earthquake appropriate to

the use of the structure. Local emergency and critical facilities will be located as far removed from seismic zones as practical, while still serving the area. In addition, no development will be permitted in areas of high or moderate landslide risk without a required slope stability investigation at the site level.

Fire Prevention. Population and growth should be monitored by City Staff to determine the location for new fire substations well in advance of actual needs. Acquisition of new fire substation sites will be coordinated with the approval of development that will require fire protection beyond the safe capabilities of existing fire stations.

Fire prevention specialists should be added when necessary to the Fire Prevention Bureau to provide for the expected increase in plan checks and for increased technical inspections and coordination with administrative staff and policy in upgrading and improving the City's Disaster and Emergency Response Plan. This would help, also, in improving the City's weed abatement program.

In cooperation with the local school district, the City will initiate educational programs in lower grades using displays and demonstrations that will expose younger children to the nature and strength of fire. Such programs will tend to replace their natural curiosity with a degree of knowledge. The City will support or sponsor exhibits and presentations in secondary schools which demonstrate the more involved aspects of fire dynamics, i.e., major contributing factors to fire hazard and the relationship of fire to the natural ecology. Encourage parental cooperation and assistance in overall fire education programs.

Disaster Preparedness

Major emergencies or disasters require the activation of the City's emergency operations plan that provides for a direction and control staff functioning at the primary emergency operating center located in the Police Department Building located at 210 North Juanita Street. In the event the primary center is not habitable, the operating staff will form and function from an alternate facility located at the Administrative Building at the Farmers Fairgrounds located at 100 South Palm Avenue.

Upon declaration of a local emergency, by duly constituted authority, or declaration of a state of emergency by the Governor of California, the organization of city government is changed

to provide the extraordinary powers necessary to respond expeditiously to the emergency. The City Manager will assume the role of Emergency Corps Commander; in his absence a line of succession has been placed under the command of the Emergency Corps Commander. In accordance with local, state, and federal statutes, the Emergency Corps Commander will be responsible for all operations within the City and for coordination/response to lateral and higher authorities.

The principle objectives of the disaster response program for the City of Hemet are:

- a) to save lives and protect property;
- b) to provide a basis for direction and control of emergency operations;
- c) to provide for the continuity of government;
- d) to repair and restore essential systems and services (e.g., emergency water supplies);
- e) to provide for the protection, use, and distribution of remaining resources;
- f) to coordinate operations with the civil defense emergency operations of other jurisdictions;
- g) to provide for a maximum degree of self-sufficiency by the City in the event of a major disaster;; and
- h) to prevent rumor and general panic and to restore calm to the population.

Emergency First Aid and Rescue

Emergency first aid services are provided to all citizens of the City. This function is integrated into the Fire Protection System. Upon request for emergency first aid, the closest engine company is dispatched, with notification to the local ambulance service for ambulance follow-up. All transportation of the injured or sick persons is handled by the Hemet Valley Ambulance Service located within the City.

Rescue services are also integrated into the Fire Protection System, such as traffic accidents requiring extraction, cave-ins, and machinery entrapment. Major type rescues such as collapsed buildings may require response to specialized equipment from the City Public Works Department or in some instances, equipment from private contractors.

I V

SEISMIC AND
GEOLOGIC HAZARDS

SEISMIC AND GEOLOGIC HAZARDS

Geologic and Seismic Setting

The seismic setting of the City of Hemet and the developing area around it is dominated by the San Jacinto Fault Zone. Earthquakes originating on active faults within the zone caused considerable destruction in Hemet and nearby San Jacinto in 1899 and again in 1918 (see discussions of earthquakes in County technical report). The recurrence of earthquakes of this or possibly greater magnitude is the overriding consideration in the seismic safety of the Hemet area.

The geologic setting of the Hemet area is characterized by a broad, relatively flat alluvial valley from which steep hills protrude somewhat like "islands" in a sea of sandy alluvium. The hills are composed of granitic with some metamorphic rocks, with the exception of Park Hill which is composed of Pleistocene continental sediments. The alluvium southwest of the Casa Loma fault ranges from about 900 to 1500 feet in depth with very rapid thinning at the edges of the hills where the bedrock is exposed. The alluvium northeast of the Casa Loma Fault is part of a down-faulted block in which Pleistocene and Recent alluvium and late Tertiary sediments are about 5000 to 8000 feet thick.

The San Jacinto Valley is a graben formed by large-scale strike slip faulting. It is an extensional opening between the Claremont and Casa Loma faults. This graben has subsided up to 8000 feet in late Cenozoic time with most of the subsidence occurring in late Quaternary time. Recent scarps indicate Holocene subsidence. There is no evidence of historic strike-slip displacement on the faults in the Hemet area, but there is evidence for late Holocene and older strike-slip motion.

Active and Potentially Active Faults

The most significant seismic hazards in the Hemet area are the several active traces of the San Jacinto Fault Zone. They are not only the sites of potential ground rupture in the event of a large earthquake, but they are also the "centers" of most intense ground shaking should the earthquake occur as the result of slip of one of the faults.

The active and potentially active faults of the zone have been zoned by the State Geologist for Special Studies as required by the Alquist-Priolo Act. Since these Zones became effective

in July, 1974, a number of geologic studies have been conducted to define the limits of geologic hazards on properties within the Zones.

The zones have been recently reviewed by Earl Hart, Senior Geologist of the California Division of Mines and Geology. The results of this review are on open file in San Francisco and utilized in the preparation of this study. Updated maps were issued on January 1, 1980 (see Figure 1).

Hart (1979) presents the following conclusions on the activity of the faults in the Hemet area:

"It is concluded that the Claremont and Casa Loma faults are clearly active and mostly well-defined. However, the traces of these faults are locally undetermined, even though the faults certainly must connect with the active Clark Fault to the southeast. The Park Hill Fault probably exists at depth, but there is no solid evidence that it is active and its general location is only inferred from indirect evidence. This view is similar to that of Rasmussen, 1978."

The following is a brief description of the various faults in the Hemet area relative to the recency of activity and certainty of their location. For a more detailed description see, Hart, 1979, open file report, California Division of Mines and Geology.

Casa Loma Fault. Northwest of Park Hill, traces of the Casa Loma Fault Zone are well defined by fault scarps. Along the southwest edge of Park Hill the fault manifests itself as a series of multiple discontinuous traces which die out laterally or pass into board warps in the alluvium. This complex zone extends south of Park Hill where it can be followed more than a mile southeast of Florida Avenue to near Johnston Ave. Southeast of this point there is no indication of the surface location on aerial photographs (Hart, 1979). The subsurface location is only crudely known being generally defined by a buried northeast-facing, basement scarp (Fett, 1968). This fault is presumed to connect with the Clark Fault southeast of Park Hill. The nature of this connection is poorly known due either to rapid sedimentation and burial of the fault traces, complex faulting or a lack of surface faulting.

Park Hill Fault. This is an inferred ground water barrier (California Department of Water Resources, 1959; Proctor, 1969; and Sharp, 1972), but its precise location is unknown. Although the fault is assumed to exist and very likely bounds Park Hill (a pressure ridge?), there is no evidence of the fault's location at or near the ground surface nor of its activity during Holocene time (Hart, 1979). This fault has been inferred to

extend westward by Sharp (1967). However, no evidence has been found to support this extension of the Park Hill Fault.

Claremont Fault. The Claremont Fault is considered a major fault in the San Jacinto Fault Zone. It defines the northeast boundary at the San Jacinto Valley Graben (Sharp, 1972, 1975). It has major strike-slip displacement. The San Jacinto Graben has been down-faulted at least 8000 feet along the fault. This fault is active and exhibits signs of activity in at least four places (see Hart, 1979). There is no evidence for this fault south of Valle Vista in Bautista Wash. The Clark and Claremont faults probably interconnect in some complex manner, as both are major strike-slip faults (Hart, 1979).

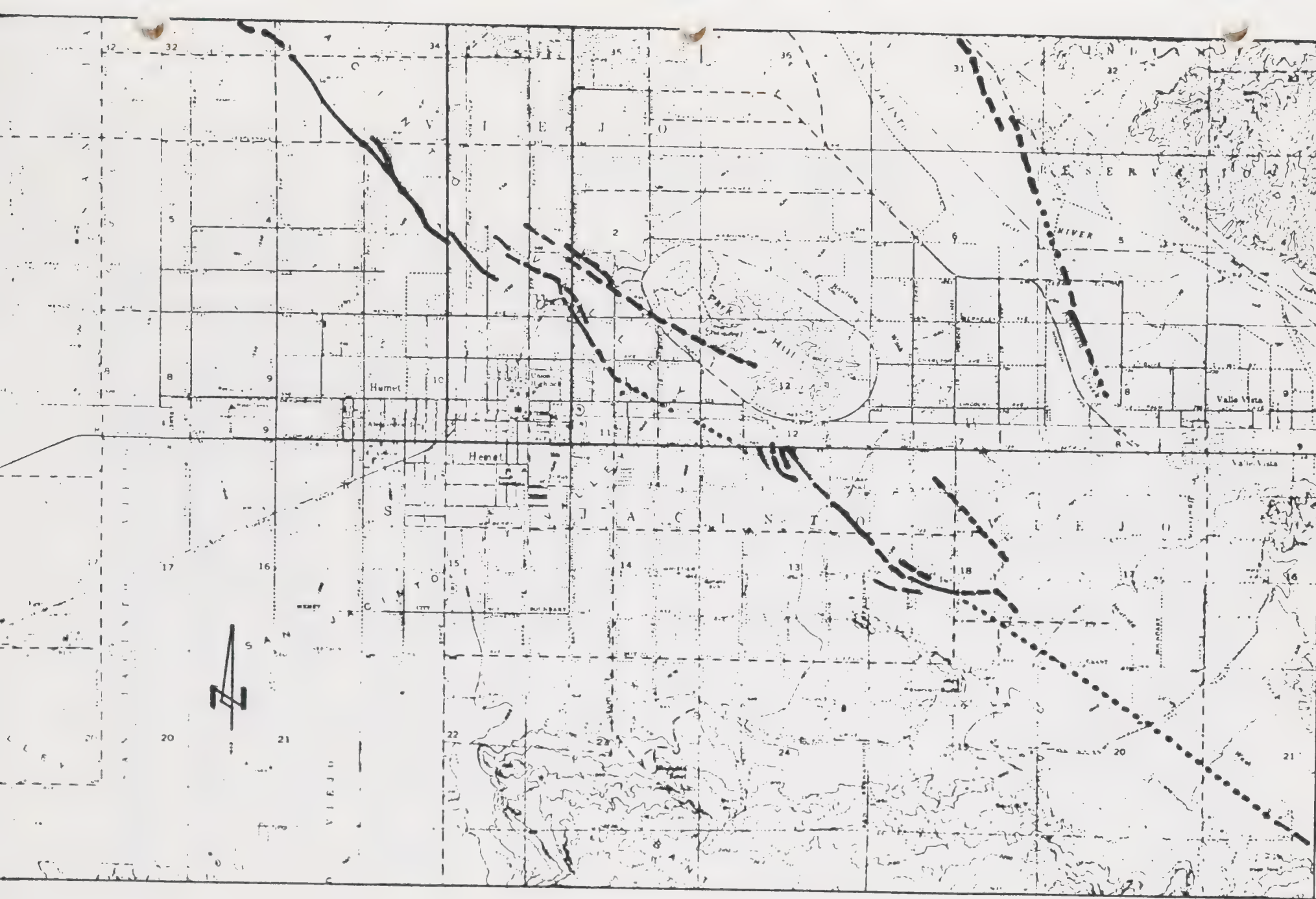
Inferred Fault A. Inferred Fault A is a linear feature at least 4,000 feet long, not depicted in Figure 1. The northwest end is a very well-defined scarp about 5 feet high. The pavement of Lyon Avenue, is stressed about half way up the scarp where tensional cracks and a small trough (sink holes below?) are developed, both with a northwest trend. On-trend to the southeast is a distressed out-building. These features are most likely associated with recent subsidence over a pre-existing fault scarp (in Holocene alluvium) of the Casa Loma Fault. Other northwest-trending scarps and tonal lineaments about 700 feet to the northeast may represent another secondary fault, but these features cannot be readily evaluated, partly because the scarp is obscured by the reservoir (Hart, 1979).

Inferred Fault B. Hart (1979) shows a northwest trending fault crossing Mayberry Avenue east of Lake Street. This fault is represented by a northwest trending southwest facing, broad escarpment about three feet high in Holocene alluvium. If this is a fault it is a relatively minor one. Most likely the feature is due to recent channeling along Bautista Wash.

Types of Seismic Hazards

There are several types of seismic hazards which can be grouped in a cause-and-effect classification that is the basis for the order of their consideration. Earthquakes originate as shock waves generated by movement along an active fault are transmitted. The primary seismic hazards are ground shaking and the potential for ground rupture along the surface trace of the fault. Secondary seismic hazards result from the interaction of ground shaking with existing soil and bedrock conditions, and include liquefaction, settlement, landslides, tsunamis or "tidal waves", and seiches (oscillating waves in lakes and reservoirs).

The potentially-damaging natural events (hazards) discussed above may interface with man-made structures. If a structure



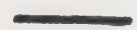


SAN JACINTO FAULT ZONE

Hemet Area

Figure 1

Scale: 1 Inch = 4000 feet

Source: State of California
Special Studies Zones
Jan. 1, 1980

 Known Fault
 Approximate Fault
 Concealed Fault

is unable to accommodate the natural event, failure will occur. The potential for such failure is termed a structural hazard, and includes not only structures themselves, but also the potential for damage or injury that could occur as the result of movement of loose or inadequately restrained objects within, on, or adjacent to a structure.

Earthquake Shaking. Strong ground shaking accompanying earthquakes generated by slippage on the nearby San Jacinto or Casa Loma faults is probably the most important seismic/geologic hazard in the Hemet area. Qualitative evaluation of the intensity, as measured on the Mercalli scale, of ground shaking during the larger, recent earthquakes indicates that the Hemet-San Jacinto area has experienced ground shaking stronger than that which would be expected based only on the distance to the "center" of the earthquakes.

The stronger-than-normal shaking in this area is attributed to the presence of moderately shallow alluvium beneath most of the area. The concepts involved in the near-surface amplification of earthquake waves by relatively shallow alluvium are presented in detail in the technical report for the County and are not repeated here. However, this effect is supported in theory and in the earthquake history of the City it is considered an important seismic consideration.

The combining distance and site effects into a microzonation applicable to both the County and individual cities is developed in the County report. Hemet's case is presented in Table 4.

Ground Rupture. In the case of a large and severe earthquake the ground surface can rupture and cause major damage where roads, water and gas mains, and buildings are located on the rupture. This effect can be a source of fire in a severe quake. It can disrupt transportation systems, communications, and emergency services critical to a quake response.

Secondary Hazards. Liquefaction is not a problem in the Hemet area because groundwater levels are in excess of 30 feet deep. Settlement, however, does appear to be a problem, at least locally, as severe settlement has been reported in at least two areas near Hemet. In his account of the 1899 San Jacinto earthquake, Claypole (1900) states:

"About ten miles west of the town of San Jacinto, in the low hills near the extinct volcano of that name, land about a square mile in area sunk from thirty to one hundred feet and was greatly broken up by many deep and wide cracks. The sinking seems to have been progressive, continuing for two or three months, and not to have occurred at once."

While this account is probably exaggerated, it does indicate a potential for substantial differential settlement of poorly

Table 4
GENERALIZED CHARACTERISTICS OF EXPECTED EARTHQUAKES
HEMET AREA *

Use Category B					Use Category C			
Zone	g	T	t	S	g	T	t	S
III A	0.54	0.1-0.2	15-20	1 x 1.25	0.43	0.1-0.2	10-15	1
III B	0.72	0.1-0.3	20-30	2 x 1.25	0.58	0.1-0.3	15-25	2
IV A	0.74	0.1-0.2	15-20	3 x 1.25	0.59	0.1-0.2	10-15	3
IV B	1.0	0.1-0.3	20-30	4 x 1.25	0.79	0.1-0.3	15-25	4
V A	0.94	0.1-0.2	15-20	5 x 1.25	0.75	0.1-0.2	10-15	5
V B	1.2	0.1-0.3	20-30	6 x 1.25	1.0	0.1-0.3	15-25	6
V C	0.63	0.2-0.4	30-40	7 x 1.25	0.5	0.2-0.4	25-35	7

Use Category D				
Zone	g	T	t	S
III A	0.27	0.1-0.2	8-12	1 x 0.64
III B	0.37	0.1-0.3	10-20	2 x 0.64
IV A	0.34	0.1-0.2	8-12	3 x 0.58
IV B	0.46	0.1-0.3	10-20	4 x 0.58
V A	0.35	0.1-0.2	8-12	5 x 0.46
V B	0.46	0.1-0.3	10-20	6 x 0.46
V C	0.23	0.2-0.4	15-25	7 x 0.46

g = Maximum ground acceleration expressed as a decimal fraction of the acceleration of gravity

T = Predominant period of ground shaking in seconds

t = Duration of "strong" shaking in seconds

S = Figure number for applicable response spectra and amplification factor for spectral values

*See Appendix D, Response Spectra and Table 2

Source: Envicom, 1976

consolidated sediments in this area during strong shaking. A similar situation exists in an area north of Lakeview where Fett, Hamilton, and Fleming (1967) report aligned sink-holes and continuous cracks 5 to 15 feet wide and up to one-half mile long in parallel or en-echelon alignments along the margin of the San Jacinto Valley and the Lakeview reentrant. These features are not associated with active faults as is other settlement in the Valley, but appears to be the result of a more widespread problem. Settlement is also occurring along the trace of the Casa Loma fault as differential movement, probably as the result of groundwater withdrawal (Fett, Hamilton, and Fleming, 1967). The movements are not associated with earthquakes, but considerable structural damage has occurred as a result of this type of settlement.

The problem of poorly compacted or improperly founded fills is only indirectly related to seismic hazards in that strong ground shaking may "trigger" an already existing instability. Such instabilities are just as likely, often are more likely to be "triggered" by other events such as heavy rainfall. The proper solution to such problems is to require that fills be placed under the supervision of a soils engineer, and, where hillside terrain is involved, also under the supervision of an engineering geologist. In so doing, the engineer and geologist should take into account forces resulting from ground shaking as specified herein or as developed from more detailed studies of site conditions.

Landslides and slope instability are a relatively minor hazard in the Hemet area. The steeper slopes are underlain primarily by granitic rocks and the downslope movement of loose rock or boulders during strong ground shaking is the most likely slope hazard in most of the area. Slope instability has been assessed using the methodology discussed in the County technical report based primarily on steepness of slope and rock type. Categories affecting the Hemet area are low to moderate risk on a scale of low to very high for all areas within the County. Were there areas rated on a scale applicable to all of California, they would more likely be rated very low to low as to their instability. However, the potential for instability exists in all the hillside areas, and engineering geologic investigations should be required for developments in these areas.

Seicheing is not a significant hazard in the area except as it may affect water storage tanks on hillside locations above inhabited structures. No specific tanks have been identified as being subject to this hazard, but tanks constructed in the future should be designed to take into account the levels of expected shaking at the applicable frequencies as defined by the spectra included in the main body of the County's technical report.

Other Geologic Hazards

The diagram on the next page is illustrative of the high costs that can be attributed to various types of seismic and geologic hazards. Of particular importance to Hemet, flooding, erosion, and soil subsidence are additional types of hazards that merit discussion. The problem of flooding, although briefly mentioned here, will be assessed in a separate element on Drainage and Flood Control. Due to the severity of the problem in the Hemet area, flooding deserves the attention that an entire element can render it.

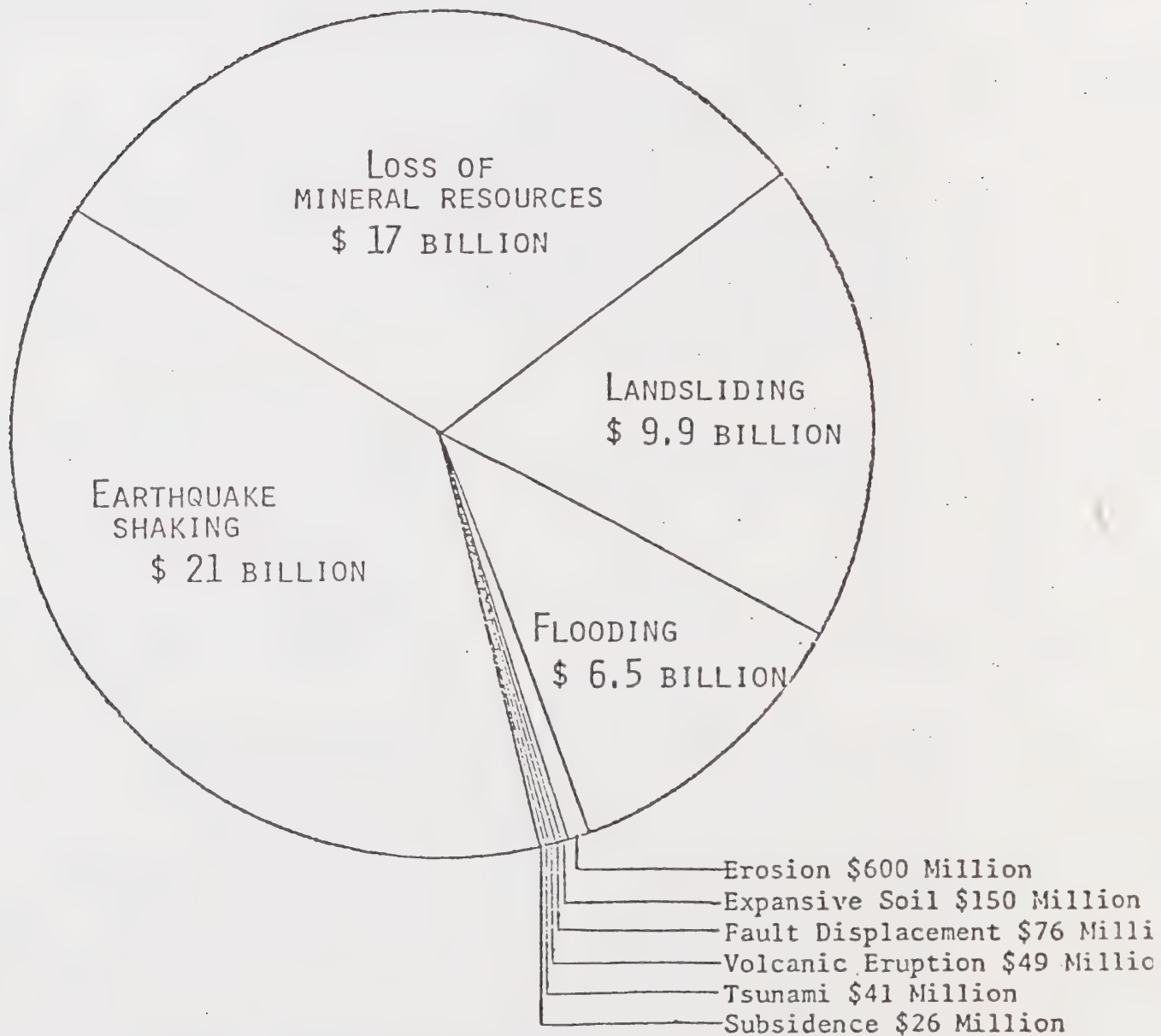
Flood Hazard. The Hemet area has experienced significant levels of flooding during periods of heavy runoff and precipitation. Sources of flooding for the Hemet area include flood waters generated by the Salt Creek watershed and floodplain Bautista Creek, and the San Jacinto River. Areas that have experienced the most severe flood problem include lands in the Salt Creek Flood Plain, the northwest portion of Hemet from Lyon to Warren and from Devonshire north to Cottonwood, and the southeast part of the City.

The downtown area of Hemet is partially protected by the Hemet Channel, a six mile in length concrete storm channel that conveys water from the City to Salt Creek near Patterson Avenue. The Hemet area is also protected from flooding that would occur along Bautista Creek, a local tributary to the San Jacinto River, located to the east of the City. Bautista Creek Channel, a joint Riverside County Flood Control and Water Conservation District-Corps of Engineers project, has a design flood capacity of 16,500 cfs and carries flood waters safely past the City of Hemet into the San Jacinto River.

Dam Inundation Hazard. The City of Hemet area would be partially inundated in the event of a complete collapse of Little Lake Dam at full capacity. The dam is an earth-fill facility that impounds approximately 90 acre-feet of water. Located southeast of the City in the Santa Rosa Hills, it is owned by the Lake Hemet Municipal Water District. A failure of Little Lake Dam would result in an inundations pathway approximately 1000-2000 feet in width to the northeast of the City (see Plate II in Envicom's Seismic Safety and Public Safety Element). Approximately 200-240 minutes would be required for the initial flood wave to traverse the area adjacent to Hemet. Damages associated with inundation would be less than major because of the limited amount of water impounded by the dam.

Inundation of a more substantial magnitude would be anticipated in the event of a failure of Lake Hemet Dam located upstream on the San Jacinto River's south fork. Although the City of Hemet would be largely untouched by such an occurrence, the overall level of damage in the Valley would be extremely severe.

Figure 2
GEOLOGIC HAZARDS IN CALIFORNIA
TO THE YEAR 2000:
A \$55 BILLION PROBLEM



Source: Urban Geology, Master Plan for California, Bulletin 198, 1973.

Erosion Hazard. Usually, problems of erosion are localized and affect smaller areas of land. In Hemet, problems of erosion are limited to the steeper slopes of the Santa Rosa Hills to the southeast and the Domenigoni Hills to the southwest. These areas will only become critical if development occurs on the slopes. In this case, the intensity of development and how runoff and streets are handled will be critical to erosion control.

Soil Subsidence. Hemet has experienced several problems associated with soil subsidence. Subsidence has occurred in the block between Devonshire and Latham and between Carmalita and Buena Vista; on properties fronting on both sides of Buena Vista, south of Florida; on properties bordering Florida on the south and on both sides of Girard; and in several blocks south of Stetson between Palm and Gilbert. In some cases, structural damage to buildings has occurred as a result of subsidence. Other areas of Hemet may be subject to this hazard, especially where high concentrations of orchards and trees were located. Here, compaction will be quite low. Since soil test are required for development, however, such problems should be avoided.

V

FIRE HAZARDS
AND PROTECTION

FIRE HAZARD AND PROTECTION

Introduction

As part of the Safety Element requirement, this section concerns fire hazard and the preparedness necessary to protect the community from such hazard. The objective of the section is to assess the fire safety situation in the City of Hemet and to develop long and short-run policy and implementation programs designed to minimize community risks, upgrade hazardous conditions, and insure proper future development from a safety standpoint. Toward these ends, the following identifies existing and potential fire hazards, fire protection capabilities, and evaluates the effectiveness of fire fighting forces that are available to combat existing and potential fire problems.

Existing Fire Situation

Many factors affect the fire hazard situation, such as, adequate comprehensive codes, effective code enforcement, a complete and integrated communications system, in-depth training, standardization of methods, mutual aid from adjoining agencies, rapid response times, and administrative coordination of all activities. Residential and commercial developments constitute the major consideration in determining fire potential in the City of Hemet because of the extensiveness of these two land uses.

The City of Hemet Fire Department has indicated that the overall fire hazard in the City, as compared to other communities in this region, is termed "moderate" within the three categories of severe, moderate, and minimal. Some concern is justified for a conflagration potential in certain residential areas due to a combination of factors, such as, high wind conditions, wood shingle roofs, and high concentration of structures. Additionally, some common fire hazards including (1) misuse of storage areas for flammables in quantities not safely protected, (2) common attics and separations existing in some older commercial structures, (3) improper parking in alleys and roadways, and (4) restricted traffic flow within certain areas require further consideration when evaluating the City's fire protection capabilities.

A great amount of cooperation is involved in coordinating inter-departmental activities to insure code compliance for all new developments. This cooperation that presently exists, enables proper types of fire protection to be required during preliminary planning and actual construction. Additionally, all commercial and industrial occupancy changes or new facilities developed are inspected to ensure that adequate fire protection is provided

for the type of use intended in accordance with applicable fire code requirements and specifications.

High Value Areas

High value areas including Hemet's principle business districts, areas where bulk storage of flammable liquids exists, and residential areas subject to conflagration are illustrated in Fig. 3. All of these areas require immediate fire control forces if fire loss is to be kept within acceptable limits. In addition to individual loss to property owners and potential loss of lives, loss of these types of occupancies has a large financial impact on the community in terms of property taxes, sales revenue, employment, and convenience.

To assist in minimizing such special fire potentials, the City has adopted the Uniform Building Code, the Uniform Fire Code, the National Fire Codes, sprinkler requirements in conjunction with the adopted codes, automatic fire extinguishing systems in certain restaurant classifications, and other fire protective requirements.

Conflagration Potential

A conflagration is so termed when a fire becomes widespread and crosses natural or prepared barriers, i.e., streets, fire walls, or prepared fire breaks. Fires in large complexes, although fire loss may be considerable, are not necessarily conflagrations unless a fire extends beyond the perimeters of the complex.

Two potential conflagration areas exist in residential areas. (Fig.3) These are due primarily to the horizontal fire spread potential based on minimal fire separations, high wind conditions, wood shingle roofs, and concentration of structures.

Other Fire Hazards

Other areas and uses in the City that create unique fire potential are above ground bulk storage of flammable liquids. Three such areas are identified in Figure 3. These areas have been located, identified, and safeguards taken to minimize the fire potential.

Gas mains located in public rights-of-way that stretch throughout the City are another source of fire hazard. Typically, they become a problem when ruptured by such forces as earthquakes or construction machinery. The buildings fronting on the west side of north Harvard have gas service lines without meters. These constitute a potential hazard. However, the City is upgrading this neighborhood and measures will be taken to correct this deficiency.

Additionally, areas with existing structural deficiencies are identified in Figure 3. As occupancies change, codes enforced for health and safety reasons, or new buildings constructed, these areas are inspected to insure that adequate fire protection is provided. Facilities with unique fire protection needs, such as, hospitals, rest homes, and retirement homes, have been provided special monitoring systems.

Fire Control Capabilities

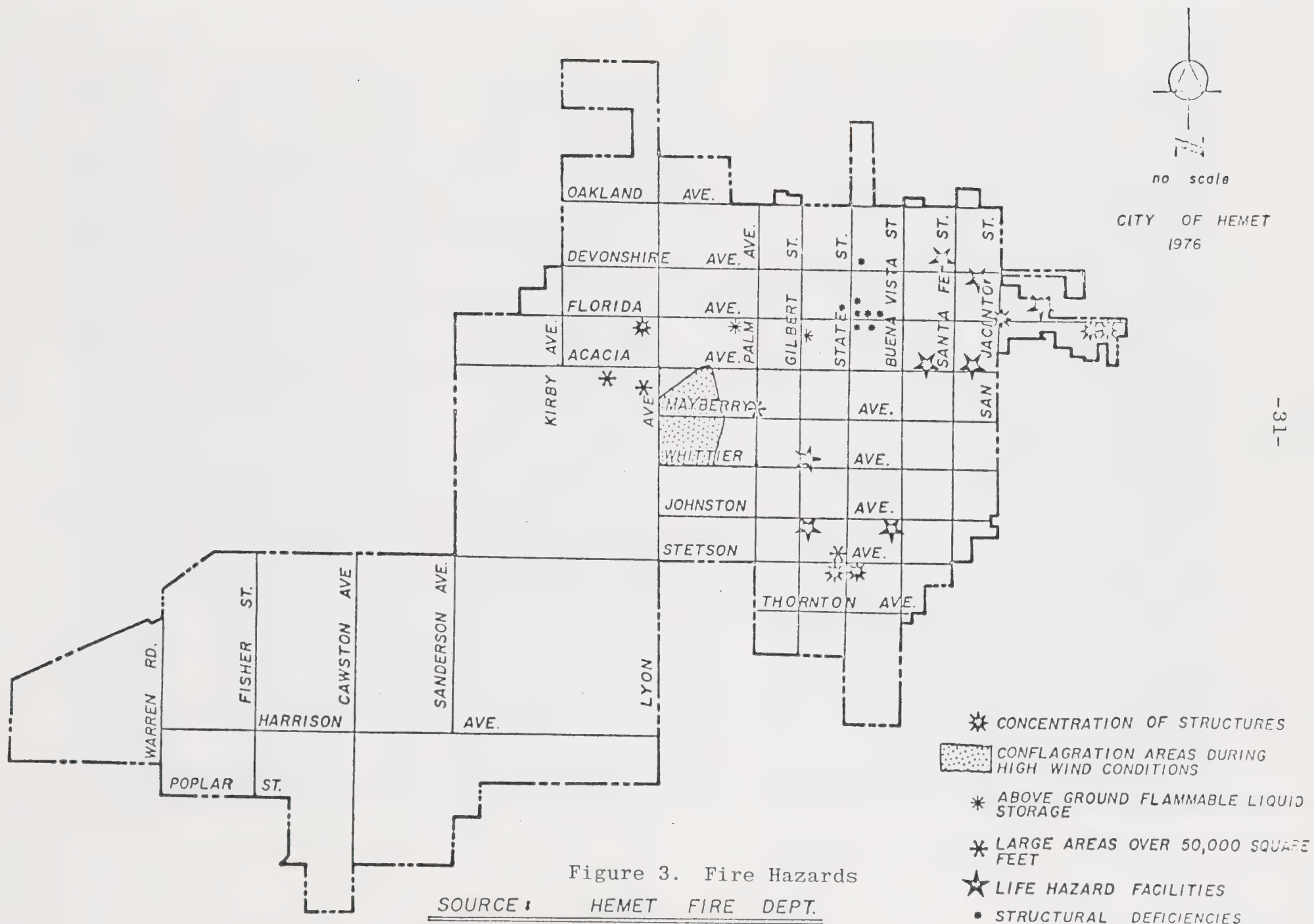
The Fire Department has the capability of fighting most normal fires, however, it is not adequately manned for major or large area fires. Few cities can afford full fire combat forces necessary to meet all fire threats. However, the City has been successful in meeting the fire protection demands made by new types of occupancies. Fires emanating from such land uses and other major or large area fires have not been frequent. When this type fire occurs within the City, the Fire Department can utilize the fire mutual aid plan with the Riverside County Fire Department and the City of San Jacinto.

Over a thirty-three month period, from 1979 thru most of 1981, the Department had received about 4850 calls. The average travel time from one of the City's two operating fire stations has been 2.95 minutes with an initial dispatch lapse (in-service receiving and dispatch time prior to disembarkment of mobile units) of 1.82 minutes for an average total time of 4.77 minutes. This breakdown is inclusive of code 2 and 3 calls.

Currently, the Hemet Fire Department operates and responds from two fire stations: Fire Station No. 1, located at 220 North Juanita Street; and, Fire Station No. 2, located at 895 West Stetson Avenue. The administrative offices, including dispatching and communication operation are located at Fire Station No. 1, just north and adjacent to City Hall.

Of prime importance to the adequacy of the fire department is response time. This is considered a function of the distance from the fire station to the incident location and the average speed of travel by fire apparatus. This is altered by the type of street facility over which the response is made and by the amount of traffic. Fire stations are presently located so as to provide an average response time of five minutes or less (see Appendix).

In terms of equipment, the Department operates two first line triple combination pumpers and one 100' ladder truck. In reserve, the Department maintains two triple combination pumpers and one rescue unit. This combines with a manpower work force of regular and reserve fire fighters plus the compliment administrative staff.



Manning practices presently include a 56 hour work week for fire fighters. The minimum manning level established for the Department's two operating stations are 6 men at Fire Station No. 1 and 3 men per shift at Fire Station No. 2. Two of the fire fighters at No. 1 operate the ladder truck.

The fire and police joint dispatch center is located at Police Headquarters in the Civic Center and adjacent to Fire Station No. 1. Emergency calls are received here, generally by local telephone. The City does not operate a street fire alarm box reporting system. The Fire and Police Departments operate from separate radio frequencies with capabilities to utilize the local public works net should failure occur in the main fire and police frequencies. All fire apparatus and staff vehicles are radio-equipped with four frequency capabilities including a State Mutual Aid Fire Net and Riverside County Fire Net. Staff communications at the scene of an incidence are made capable by the utilization of hand-held portable radios. During extreme radio traffic loads, the Fire Department has the capability of utilizing other fire nets, thereby reducing the radio traffic on the combined fire and police net.

Water supply required for fire protection use is supplied from three sources: (1) the City water system, (2) Eastern Municipal Water District, and (3) the Lake Hemet Municipal Water District. The City water system has a total of five wells located within the City that will produce, collectively, about 4,000 gallons per minute. The City water system may receive additional water supply when needed from Eastern Municipal and Lake Hemet Municipal, adding an additional 3,000 gallons per minute. The average daily water consumption utilized by the City is four million gallons per day. The City maintains three above ground water reservoirs for a total of 4.25 million gallons. These facilities contribute to the City's overall fire flow capability.

The required fire flow is the rate of flow in gallons per minute needed for firefighting purposes to confine and control a major fire to a building or physical confines of the area. Greater fire flows may be required for structures or developments which present additional hazard potential. This would include greater building heights, higher exposures to fire hazard, a minimum of fire protection facilities, and occupancies involving hazardous processes and materials. Fire flow requirements throughout the City are based on specific land uses. In high hazard and industrial areas, fire flow requirements can vary from 4,000 g.p.m. to 6,000 g.p.m. Supplemental fire protection systems may include fire hydrants, automatic fire sprinkler systems, and other related systems and appliances as required for the protection of life and property. The required residual pressure of 20 p.s.i. shall, at all times, remain in the underground water system with the required g.p.m. flowing.

Fire Losses

Prior to fiscal year 78/79 Hemet's fire losses were held to what should be considered a minimum for a City its size. Since then, there has been a marked increase that peaked in fiscal year 79/80. The following represents a breakdown in fire losses the last seven years:

FISCAL YEAR	PROPERTY LOSS	CONTENTS LOSS	TOTAL LOSS
1980/81	\$147,000	\$ 75,630	\$269,120 ¹
1979/80	-----	-----	852,090
1978/79	-----	-----	259,940
1977/78	64,670	12,150	76,825
1976/77	60,575	25,075	85,650
1975/76	34,725	15,235	49,960
1974/75	-----	-----	35,800

¹Total includes \$46,490 loss in "other" category.

Fire Prevention

Applicable code enforcement, fire investigation, public relations, fire and life safety educational programs for the general public, school staff and students, general hospital and convalescent hospital employees, and maintaining written records is the responsibility of the Bureau of Fire Prevention. As a function of the City Fire Department, the Bureau checks all construction plans including some dwellings to determine compliance with applicable fire and life safety codes. The Bureau works closely with other City departments to assist the developer or builder in providing adequate fire protection to proposed structures. Code enforcement for existing occupancies, recommended code changes, and assisting the Fire Chief with future fire problems is also the responsibility of the Bureau.

Fire prevention is based upon knowledge of fire and building codes, what and how different substances burn, locations, source and ignition causes. Thorough and prompt investigation of a fire cause is one of the principle bases for the success of any fire prevention program. Such programs are planned and placed in effect with actual field inspection production, and problems encountered are closely monitored.

The Fire Prevention Bureau is charged with the responsibility for investigating all arson and incendiary fires. The cause for such fires are investigated by a combined police and fire department team. A hazardous weed abatement program is also conducted by the Bureau and is in effect throughout the year.

V I

RELATIONSHIPS TO OTHER
GENERAL PLAN ELEMENTS

RELATIONSHIPS TO OTHER GENERAL PLAN ELEMENTS

The Seismic and Public Safety Element contains the analysis of all major natural hazards in the City; and, as such, has important policy implications for other elements in the General Plan. In particular, the Seismic and Public Safety Element provides significant information for the Land Use, Housing, Open Space, and Circulation Elements. It is recommended that these elements be prepared to give specific recognition to the policies adopted in this Element.

Land Use Element

The Land Use Element will be influenced most directly by the recommendations that regulate land use in areas of significant natural hazards. The Land Use Element may also recommend land use controls for those areas in which combinations of individual hazard zones result in a high level of overall hazard.

Housing Element

The policies of this Element provide input to the Housing Element primarily by recommending design and construction modifications. The following recommendations pertain directly to the Housing Element:

1. All new construction should conform to the revised Uniform Building Code Earthquake Regulations.
2. Existing high occupancy residential structures found to be seismically vulnerable should be strengthened or replaced or their occupancy level should be reduced.
3. Construction in the 100-year floodplain should ensure adequate flood-proofing, if other flood control measures are not implemented.
4. Untreated shingle roofs should be prohibited in areas of high fire hazard.

Open Space and Conservation Element

The Seismic and Public Safety Element identifies certain areas which will be considered for open space designation

as part of the Open Space and Conservation Element. These areas include lands designated as high landslide risk areas, the 100-year floodplain, areas subject to inundation immediately beneath major dams, and areas where surface faulting has been shown to exist.

Circulation Element

The Circulation Element will take into account that the transportation network in Hemet will be severely impacted in the event of a major earthquake or flood. An earthquake will affect primarily plans for evacuation in the event of a major disaster. Should a 100-year flood or dam failure of Little Lake occur, Highway 74 which traverses the City, will be inundated. This is expected to have an important impact on potential evacuation of the area, and alternative evacuation measures will need to be planned.



V I I

A P P E N D I X

A T H R U D

APPENDIX A
EARTHQUATE SAFETY PROCEDURES

EARTHQUAKE SAFETY PROCEDURES

Before an Earthquake

1. Potential earthquake hazards in the home should be removed or corrected. Top-heavy objects and furniture, such as bookcases and storage cabinets, should be fastened to the wall and the largest and heaviest objects placed on lower shelves. Water heaters and other appliances should be firmly bolted down, and flexible connections should be used whenever possible.
2. Supplies of food and water, flashlight, a first-aid kit, and a battery-powered radio should be set aside for use in emergencies. Of course, this is advisable for other types of emergencies, as well as for earthquakes.
3. One or more members of the family should have a knowledge of first aid procedures because medical facilities nearly always are overloaded during an emergency or disaster, or may themselves be damaged beyond use.
4. All responsible family members should know what to do to avoid injury and panic. They should know how to turn off the electricity, water, and gas; they should know the locations of the main switch and valves. This is particularly important for teenagers who are likely to be alone with smaller children.
5. It is most important for a resident of California to be aware that this is "earthquake country" and that earthquakes are most likely to occur again where they have occurred before. Building codes that require earthquake-resistant construction should be vigorously supported and, when enacted into law, should be rigorously enforced. If effective building codes and grading ordinances do not exist in your community, support their enactment.

During An Earthquake

1. The most important thing to do during an earthquake is to remain calm. If you can do so, you are less likely to be injured. If you are calm, those around you will have a greater tendency to stay calm, too. Make no moves or take no action without thinking about the possible consequences. Motion during an earthquake is not constant; commonly, there are a few seconds between tremors.
 2. If you are inside a building, stand in a strong doorway or get under a desk, table, or bed. Watch for falling plaster, bricks, light fixtures, and other objects. Stay away from tall furniture, such as china cabinets, bookcases, and shelves. Stay away from windows, mirrors, and chimneys. In tall buildings, it is best to get under a desk if it is securely fastened to the floor, and to stay away from windows or glass partitions.
- Source: State Office of Emergency Preparedness

3. Do not rush outside. Stairways and exits may be broken or may become jammed with people. Power for elevators and escalators may have failed. Many of the 115 persons who perished in Long Beach and Compton in 1933 ran outside only to be killed by falling debris and collapsing chimneys. If you are in a crowded place such as a theater, athletic stadium, or store, do not rush for an exit because many others will do the same thing. If you must leave a building, choose your exit with care and, when going out, take care to avoid falling debris and collapsing walls or chimneys.

4. If you are outside when an earthquake strikes, try to stay away from high buildings, walls, power poles, lamp posts, or other structures that may fall. Falling or fallen electrical power lines must be avoided. If possible, go to an open area away from all hazards but do not run through the streets. If you are in an automobile, stop in the safest possible place, which, of course, would be an open area, and remain in the car.

After An Earthquake

1. After an earthquake, the most important thing to do is to check for injuries in your family and in the neighborhood. Seriously injured persons should not be moved unless they are in immediate danger of further injury. First aid should be administered, but only by someone who is qualified.

2. Check for fires and fire hazards. If damage has been severe, water lines to hydrants, telephone lines, and fire alarm systems may have been broken; contacting the fire department may be difficult. Some cities, such as San Francisco, have auxiliary water systems and large cisterns in addition to the regular system that supplies water to fire hydrants. Swimming pools, creeks, lakes, and fish ponds are possible emergency sources of water for fire fighting.

3. Utility lines to your house - gas, water, and electricity - and appliances should be checked for damage. If there are gas leaks, shut off the main valve which is usually at the gas meter. Do not use matches, lighters, or open-flame appliances until you are sure there are no gas leaks. Do not use electrical switches or appliances if there are gas leaks, because they give off sparks which could ignite the gas. Shut off the electrical power if there is damage to the wiring; the main switch usually is in or next to the main fuse or circuit breaker box. Spilled flammable fluids, medicines, drugs, and other harmful substances should be cleaned up as soon as possible.

4. Water lines may be damaged to such an extent that the water may be off. Emergency drinking water can be obtained from water heaters, toilet tanks, canned fruits and vegetables, and melted ice cubes. Toilets should not be flushed until both the incoming water lines and outgoing sewerlines have been

checked to see if they are open. If electrical power is off for any length of time, plan to use the foods in your refrigerator and freezer first before they are spoiled. Canned and dried foods should be saved until last.

5. There may be much shattered glass and other debris in the area, so it is advisable to wear shoes or boots and a hard hat if you own one. Broken glass may get into foods and drinks. Liquids can be either strained through a clean cloth such as a handkerchief or decanter. Fireplaces, portable stoves, or barbecues can be used for emergency cooking but the fireplace chimney should be carefully checked for cracks and other damages before being used. In checking the chimney for damage, it should be approached cautiously, because weakened chimneys may collapse with the slightest of aftershocks. Particular checks should be made of the roof line and in the attic because unnoticed damage can lead to a fire. Closets and other storage areas should be checked for objects that have been dislodged or have fallen, but the doors should be opened carefully because of objects that may have fallen against them.

6. Do not use the telephone unless there is a genuine emergency. Emergencies, and damage reports, alerts, and other information can be obtained by turning on your radio. Do not go sightseeing; keep the streets open for the passage of emergency vehicles and equipment. Do not speculate or repeat the speculations of other - this is how rumors start.

7. Stay away from beaches and other waterfront areas where seismic sea waves (tsunamis), sometimes called "tidal waves", could strike. Again, your radio is the best source of information concerning the likelihood that a seismic sea wave will occur. Also stay away from steep landslide-prone areas if possible, because aftershocks may trigger a landslide or avalanche, especially if there has been a lot of rain and the ground is nearly saturated. Also stay away from earthquake-damaged structures. Additional earthquake shocks known as "aftershocks" normally occur after the main shock, sometimes over a period of several months. These are usually smaller than the main shock but they can cause damage, too, particularly to damaged and already weakened structures.

8. Parents should stay with young children who may suffer psychological trauma if parents are absent during the occurrence of aftershocks.

9. Cooperate with all public safety and relief organizations. Do not go into damaged areas unless authorized; you are subject to arrest if you get in the way of, or otherwise hinder, rescue operations. Martial law has been declared in a number of earthquake disasters. In the 1906 disaster in San Francisco, several looters were shot.

10. Send information about the earthquake to the Seismological Field Survey to help earth scientists understand earthquakes better.

APPENDIX B

SUMMARY OF SIGNIFICANT
COURT DECISIONS AND LEGISLATION

Summary of Significant Court Decisions and Legislation

(Source: Urban Geology Master Plan for California, 1973)

In recent years there have been many attempts by government to reduce losses from geologic hazards. The following summaries are some of the more important ones.

COURT DECISIONS

1. Sheffett decision (Los Angeles Superior Court Case No. 32487): Declared that a public entity is liable for damages to adjacent property resulting from improvements planned, specified or authorized by the public entity in the exercise of its governmental power. (The State Supreme Court refused to rehear this decision, which establishes a judicial precedent.)
2. L.A. County Superior Court (Case No. 684595 and consolidated cases): This decision found the County liable for damages which may have resulted from roadwork and the placement of fill by the County. This case was in regard to the Portuguese Bend landslide, Palos Verdes Hills, Los Angeles County, California.
3. City of Bakersfield vs Miller (48 Cal. Rptr. 889), heard in the State Supreme Court 1966: This decision affirms that the city may declare an older structure not in compliance with the newly adopted Uniform Building Code to be a public nuisance. Further, the city may enforce abatement of the non-conforming condition even though to do so may require the building to be demolished.
4. Burgess vs. Conejo Valley Development Co. (Connor vs. Great Western Savings and Loan Association) (73 Cal. Rptr. 369) heard in the State Supreme Court in 1968, concerning damage to tract homes from expansive soil in Thousand Oaks, Ventura County: This decision affirmed that the home buyer, both first buyer and all subsequent ones, has the right to protection from negligent construction practice leading to damage. In this case, neither contractor, county inspectors, nor representatives of the major lending institution acted to ascertain expansive soil conditions, or to prevent damage from them.
5. Oakes vs. The McCarthy Co. (California Appellate Reports, 2d Series, 267, 1968) the court held that in the Palos Verdes area, Los Angeles County, a developer and soils engineering company could be liable in negligence for damages to a home resulting from using improper (clay) fill material and improperly compacting that fill so that earth movement resulted. Also, the court awarded punitive damages against the developer for fraudulent conceal-

ment of material facts concerning the property, i.e., failure to volunteer to the prospective buyer that the house was built upon fill.

LEGISLATION

PUBLIC RESOURCES CODE

Section 660-662 and 2621-2625: These sections require the State Geologist to delineate special studies zones encompassing potentially and recently active fault traces. It requires cities and counties to exercise specified approval authority with respect to real estate developments or structures for human occupancy within such delineated zones.

Section 2700-2708: These sections require the Division of Mines and Geology to purchase and install strong-motion instruments (to measure the effects of future earthquakes) in representative structure and geologic environments throughout the state.

Section 2750: Establishes a state mining and minerals policy which, among other things, encourages wise use of mineral resources.

EDUCATION CODE

Section 15002.1: This section requires that geological and soils engineering studies be conducted on all new school sites and on existing sites where deemed necessary by the Department of General Services.

Section 15451-15466: These sections constitute the Field Act and require that public schools be designed for the protection of life and property. These sections, enacted in 1933 after the Long Beach earthquake, are enforced by the State Office of Architecture and Construction in accordance with regulations contained in Title 21 of the California Administrative Code.

HEALTH AND SAFETY CODE

Sections 15000 et seq.: These sections require that geological and engineering studies be conducted on each new hospital or additions affecting the structure on an existing hospital, excepting therefrom one story Type V buildings 4000 sq. ft. or less in area.

Sections 19100-19150: These sections constitute the Riley Act and require certain buildings to be constructed to resist lateral forces, specified in Title 24 California Administrative Code.

Section 17922, 17951-17958.7: These sections require cities and counties to adopt and enforce the Uniform Building Code, including a grading section (chap. 70), a minimum protection against some geologic hazards.

BUSINESS AND PROFESSIONAL CODE

Section 7800-7887: These sections provide for the registration of geologists and geophysicists, and the certification of certain geologists in the specialty of engineering geology.

Section 11010: This section requires that a statement of the soil conditions be prepared and needed modifications be carried out in accordance with the recommendations of a registered civil engineer.

Section 11100-11629: These sections require studies in subdivisions to evaluate the possibilities of flooding and unfavorable soils.

GOVERNMENT CODE

Section 8589.5: This section requires that inundation maps and emergency evacuation plans be completed for areas subject to inundation by dam failure.

Section 65300-65302.1: These sections require that each city and county shall adopt the following elements:

Seismic Safety Element consisting of the identification and appraisal of seismic hazards including an appraisal of landsliding due to seismic events.

Conservation element including the conservation, development and utilization of minerals.

Safety element including protection of the community from geologic hazards including mapping of known geologic hazards.

APPENDIX C
GENERAL CHARACTERISTICS OF EARTHQUAKES

A. GENERAL CHARACTERISTICS OF EARTHQUAKES

1. The Source of Earthquakes

Earth scientists are generally agreed that earthquakes originate as the result of an abrupt break or movement of the rock in the relatively brittle crust of the earth. The earthquake is the effect of the shock waves generated by the break, much the same as sound waves (a noise) are generated by breaking a brittle stick. If the area of the break is small and limited to the deeper part of the crust, the resulting earthquake will be small. However, if the break is large and extends to the surface, then the break can result in a major earthquake.

These breaks in the earth's crust are called faults. In California, faults are extremely common, and vary from the small breaks of an inch or less that can be seen in almost any road-cut, to the larger faults such as the San Andreas on which movement over many millions of years has amounted to hundreds of miles. In addition to the size of faults, their "age" is also important. Many large faults have not moved for millions of years; they are considered "dead" or "inactive." They were probably the source of great earthquakes millions of years ago but are not considered dangerous today.

Since faults vary as to the likelihood of their being the source of an earthquake, considerable effort has, and is continuing to be expended by geologists and seismologists to determine and delineate the faults likely to generate significant earthquakes. These faults are classified generally as follows:

- (1) An historically active fault is one which is known to have slipped during historical time, or one which is associated with an alignment of earthquake epicenters. In California this "historical time" span is limited to approximately 150 years.
- (2) An active fault is one that has moved in the recent geologic past, and that can be expected to move again in the foreseeable future. The "recent geologic past" is generally interpreted to include recent geologic time; a period of approximately 10,000 years. However, a precise definition of "active fault," such as is needed where the term is included in legal documents, is still a matter of considerable debate.
- (3) A potentially active fault is one that lacks the criteria to be classified as active, but which must be considered suspect because of offset of Quaternary sediments (up to approximately 2 million years old) or the presence of scattered earthquake epicenters. This classification, may be applied as much due to lack of definitive data as to the presence of data that definitely precludes recent movement.

Source: State of California, State Geologist, Division of Mines and Geology

2. Describing an Earthquake

Several terms are used to describe the location, "size," and effects of an earthquake. A clear understanding of the meaning of these terms and their limitations is essential to an understanding of the results of the investigation.

The location of an earthquake is generally given as the epicenter of the earthquake. This is a point on the earth's surface vertically above the hypocenter or focus of the quake. The latter is the point from which the shock waves first emanate. However, as discussed, above, earthquakes originate from faults. These are surfaces not points, so the hypocenter is only one point on the surface (or volume) that is the source of the earthquake.

Magnitude describes the size of the earthquake itself. Technically, it is defined as the logarithm of the maximum amplitude recorded on a standard seismograph at 100 kilometers (62 miles) from the epicenter. The most important part of this definition is that it is a logarithmic scale and an increase of one in magnitude (e.g., magnitude 5.0 to 6.0) represents an increase of 10 in the amplitude of the recorded wave. It should also be noted that the magnitude of an earthquake is determined at a considerable distance from the epicenter of the earthquake, and that it is based on ground displacement rather than ground acceleration.

Intensity describes the degree of shaking in terms of the damage at a particular location. The scale used today is the Modified Mercalli Scale, and is composed of 12 categories (I to XII) of damage as described in Table 1. The Roman numerals are used to emphasize that the units in the scale are discrete categories rather than a continuous numerical sequence as is the magnitude scale. It is important to remember that intensity is a very general description of the effects of an earthquake, and depends not only on the size of the quake and the distance to its center but also on the quality of the construction that has been damaged and the nature of local ground conditions.

3. Occurrence and Recurrence of Earthquakes

Earthquakes have had in the past a certain occurrence in space and time. These occurrences may or may not set certain patterns that can form the basis for predicting their occurrence in the future. When such occurrences are analyzed in time, certain characteristics may statistically recur at definite intervals. If it can be shown that a particular magnitude earthquake recurs on a fault on the average of a certain number of years, this number can be said to be the recurrence interval for the magnitude. If the interval of time is set (e.g., a 100-year period), then earthquakes of a particular magnitude will recur a certain number of times in the specified period.

TABLE 1. MODIFIED MERCALLI INTENSITY SCALE OF 1931
(from United States Earthquakes)

Intensity	Description of Damage
I	Not felt except by a very few under specially favorable circumstances. (I Rossi-Forel Scale)
II	Felt only by a few persons at rest, especially on upper floors of buildings. Delicately suspended objects may swing. (I to II Rossi-Forel Scale)
III	Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing motorcars may rock slightly. Vibration like passing of truck. Duration estimated. (III Rossi-Forel Scale)
IV	During the day, felt indoors by many, outdoors by few. At night, some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like heavy truck striking building. Standing motorcars rocked noticeably. (IV to V Rossi-Forel Scale)
V	Felt by nearly everyone, many awakened. Some dishes, windows, etc., broken; a few instances of cracked plaster; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop. (V to VI Rossi-Forel Scale)
VI	Felt by all, many frightened and run outdoors. Some heavy furniture moved; a few instances of fallen plaster or damaged chimneys. Damage slight. (VI to VII Rossi-Forel Scale)
VII	Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerably in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving motorcars. (VIII Rossi-Forel Scale)
VIII	Damage slight in specially designed structures; considerable in ordinary, substantial buildings, with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving motorcars disturbed. (VIII to IX Rossi-Forel Scale)
IX	Damage considerable in specially designed structures; well-designed, frame structures thrown out of plumb; great in substantial buildings, with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. (IX Rossi-Forel Scale)
X	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with their foundations; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed (slopped) over banks. (X Rossi-Forel Scale)
XI	Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.
XII	Damage total. Waves seen on ground surfaces. Lines of sight and level distorted. Objects thrown upward into air.

In California, as in most large areas, small earthquakes occur much more often than large earthquakes. Also, there is a fairly definite pattern in that the logarithm of the number of events of a particular magnitude that have occurred in the past is approximately proportional to the magnitude of those events. This relationship appears to apply to larger areas such as California and western Nevada, some smaller areas such as the Los Angeles Basin, and to some faults such as the Newport-Inglewood. However, this relationship does not apply to all faults, and it should be applied to small areas, such as cities or individual sites, with great care.

B. ENGINEERING CHARACTERISTICS OF EARTHQUAKES

The data of seismologists and geologists are, in general, not applicable to the engineering design of earthquake-resistant structures. The seismograph, for example, is a very sensitive instrument designed only to record earthquakes at great distances. A level of shaking that would be meaningful to an engineer in designing a building would put most seismographs completely off-scale.

As a result, it has been necessary to design and install special instruments to record the strong motions of earthquakes that are of interest to the engineer in the design of earthquake-resistant structures. The first such instruments, principally accelerographs and seismoscopes, were installed by the U.S. Coast and Geodetic Survey in the late 1920's and the 1933 Long Beach earthquake was the first real test of the system. The motions were apparently stronger than expected, and the accelerograph record from Long Beach itself has never been adequately deciphered. Since that time, the instrumentation and analytical techniques have been continuously improved, and many excellent records have been obtained of the more recent strong earthquakes.

The following sections are a brief introduction to the concepts, data, and application of strong-motion records. The science is relatively young, and tends to grow in bursts following the recording of a damaging earthquake.

1. Acceleration, Velocity, and Displacement

The accelerograph is a short-period instrument (in contrast to the seismograph), and measures the acceleration of the ground or the structure on which it is mounted. Figure 1 shows the ground acceleration recorded just a few hundred feet from the fault during the 1966 Parkfield earthquake. The velocity and displacement curves have been derived from it by integration. It is a particularly good example of the relationships of these three parameters of motion because of the relatively "clean", single-displacement pulse that corresponds to two velocity peaks and four acceleration peaks. Figure 2 shows the more typically complex record of the San Fernando earthquake as recorded at Pacoima Dam. Neither of the two, however, are typical records in terms of accelerations recorded. The Pacoima record shows the largest acceleration recorded to date (1.25g), and the Parkfield record (0.5g) was the largest before the San Fernando earthquake.

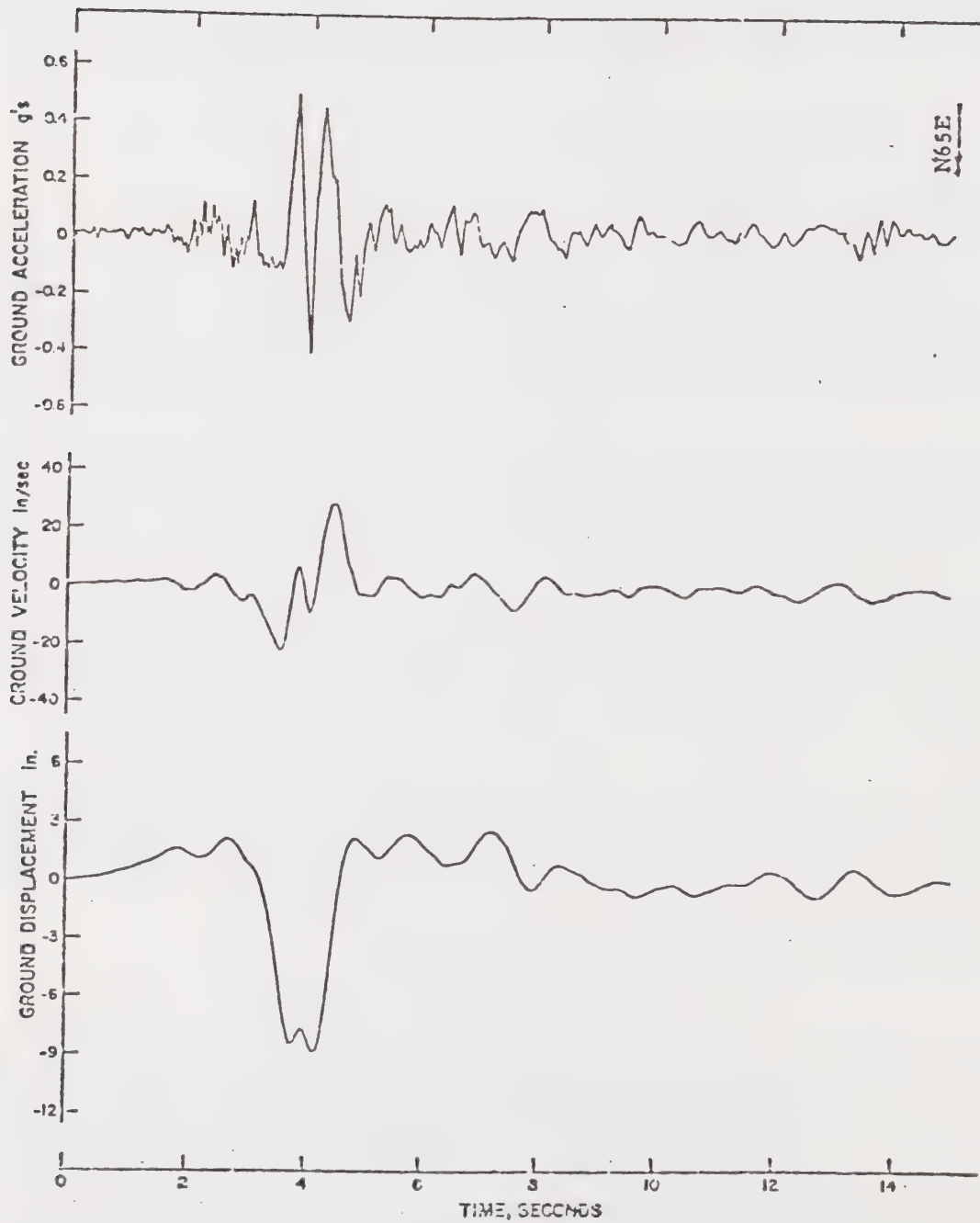
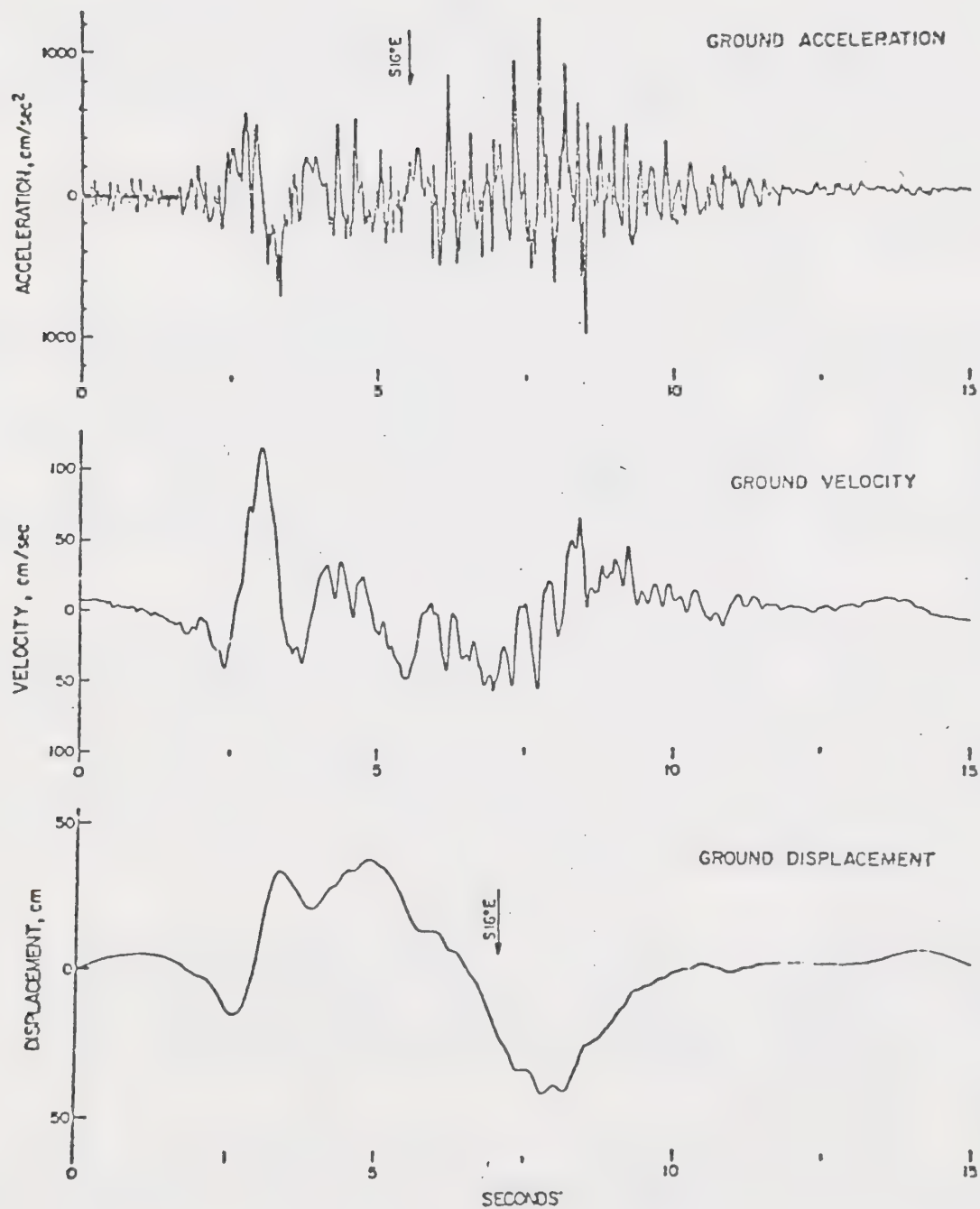


Figure 1.

Station 2 N65E Motion.

from Housner & Trifunac, 1967



Acceleration, velocity and displacement in the S16°E direction during the main event of the San Fernando earthquake of February 9, 1971, 06:00 (PST).

Figure 2.

from Trifunac & Hudson, 1971

It should also be noted that accelerographs normally record three components; two in the horizontal plane at right angles to each other, and one vertical. Only one component is shown in each of the two examples.

Maximum acceleration is one of the basic parameters describing ground shaking, and has been the one most often requested by agencies such as FHA in determining the earthquake hazard to residential structures. It is particularly important for "low-rise" construction (up to 3 to 5 stories) and other structures having natural periods in the range of 0.3 - 0.5 seconds or less.

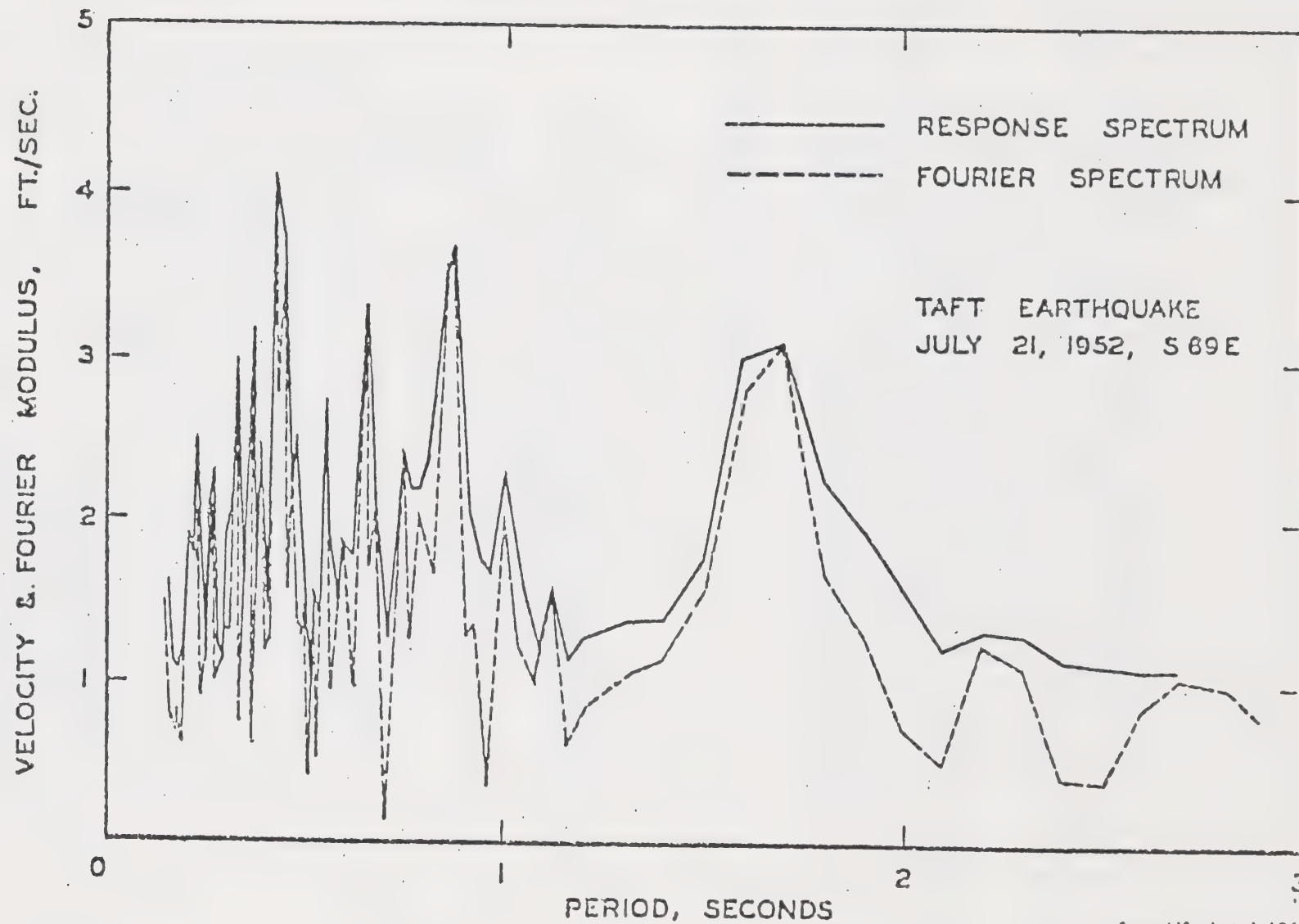
2. Frequency Content - Fourier and Response Spectra

The frequency content of the ground motion is particularly important for the intermediate and higher structures. The problem can be compared to pushing a child in a swing. If the pushes are timed to coincide with the natural period of the swing, then each push makes the swing go higher. However, if the timing is not right, then most of the push is lost "fighting" the natural period of the swing. The situation is similar during earthquakes. Structures have certain periods of vibration. If the pulses of the earthquake match the natural period of the structure, even a moderate earthquake can cause damaging movement. However, if the match is poor, the movement and resulting damage will be much less.

Two methods are commonly used to analyze and display the frequency content of an earthquake. A Fourier analysis is a common mathematical method of deriving the significant frequency characteristics of a time-signal such as the record of an earthquake. The results of the analysis are an amplitude term and a phase term. The amplitude is normally plotted against the period for that amplitude to give a Fourier amplitude spectrum for the range of frequencies that are of interest. Since the mathematical procedure is basically an integration of acceleration with time, the Fourier amplitude has the units of velocity.

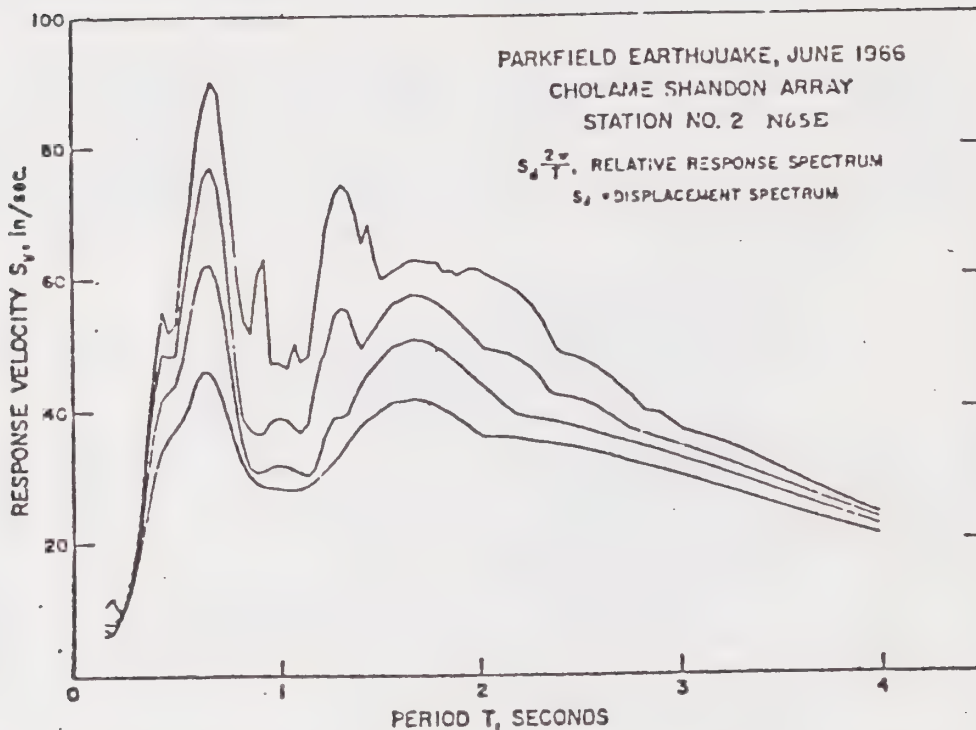
A response spectrum is derived by a similar mathematical process, but is slightly different in concept. It represents the maximum response of a series of oscillators, having particular periods and damping, when subjected to the shaking of the earthquake. The result is also expressed in terms of velocity with the particular nomenclature depending on the precise method used to derive the spectrum.

The Fourier spectrum can be generally described as the energy available to shake structures having various natural frequencies. The response spectrum gives the effect, in maximum velocity, of this available energy on simple structures having various frequencies and damping. At zero damping the two are very similar. Figure 3 shows a plot of both the Fourier spectrum and the response spectrum with zero damping for the Taft earthquake of 1952. Figure 4 shows the response spectrum for the Parkfield record (Figure 1) for several levels of damping.



from Alford et al, 1964

Figure 3



Response Spectra, Station 2-N65E. The curves are for 0, 2, 5 and 10% damping

from Housner & Trifunac, 1967

Figure 4

3. Near-Surface Amplification

The shock waves of an earthquake radiate outward from the source (i.e. the slipped fault) through the deeper and relatively more dense parts of the earth's crust. In this medium, the waves travel at high velocity and with relatively low amplitude. However, as they approach the surface, the velocity of the medium decreases and may become quite variable if layers of different rock types are present. The overall effect is generally an amplification of the wave or of certain frequencies within the spectrum of the wave.

The most consistently applicable effect is the increase in wave amplitude that accompanies the decrease in velocity. This relationship can be compared to laws of mechanics that require the conservation of energy and momentum. In the case of earthquake waves, the energy of velocity is transferred to energy of wave amplitude when the velocity decreases.

APPENDIX D
RESPONSE SPECTRUMS FOR HEMET AREA

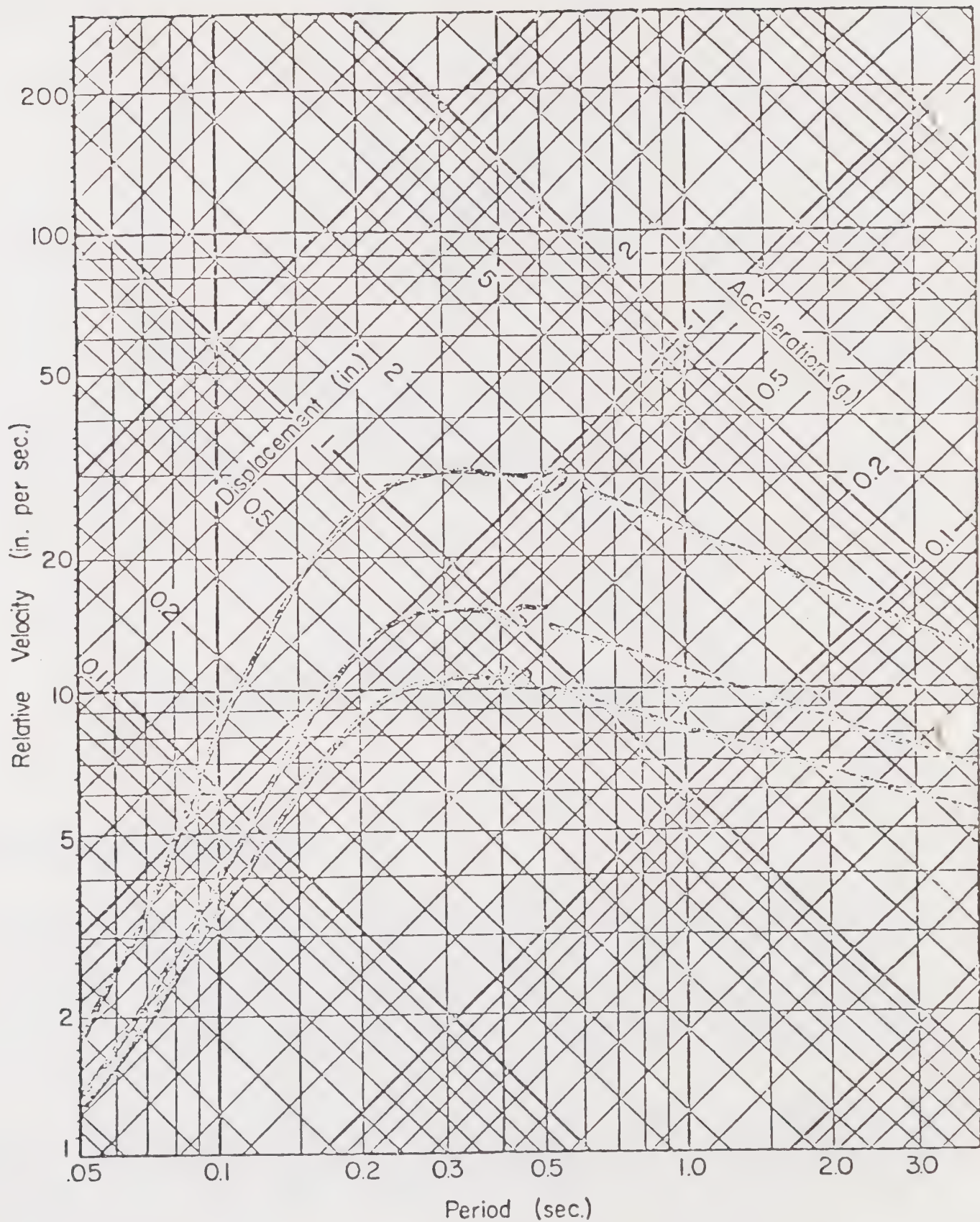


Figure A. Response spectrum from Zone IIIA. Curves are for 0, 5, and 10% critical damping.

Source: Envicom, 1976

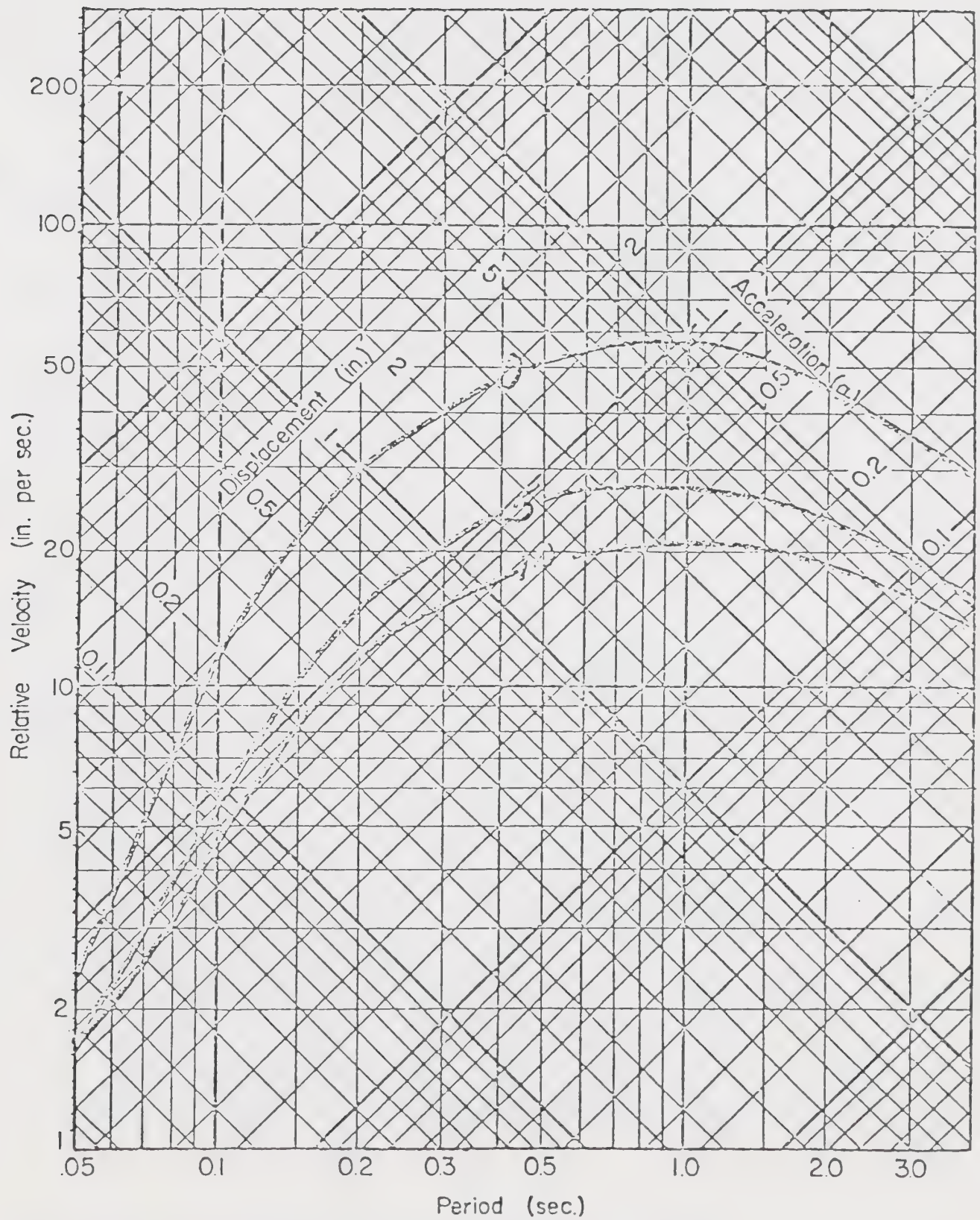


Figure B. Response spectrum from Zone IIIB. Curves are for 0, 5, and 10% critical damping.

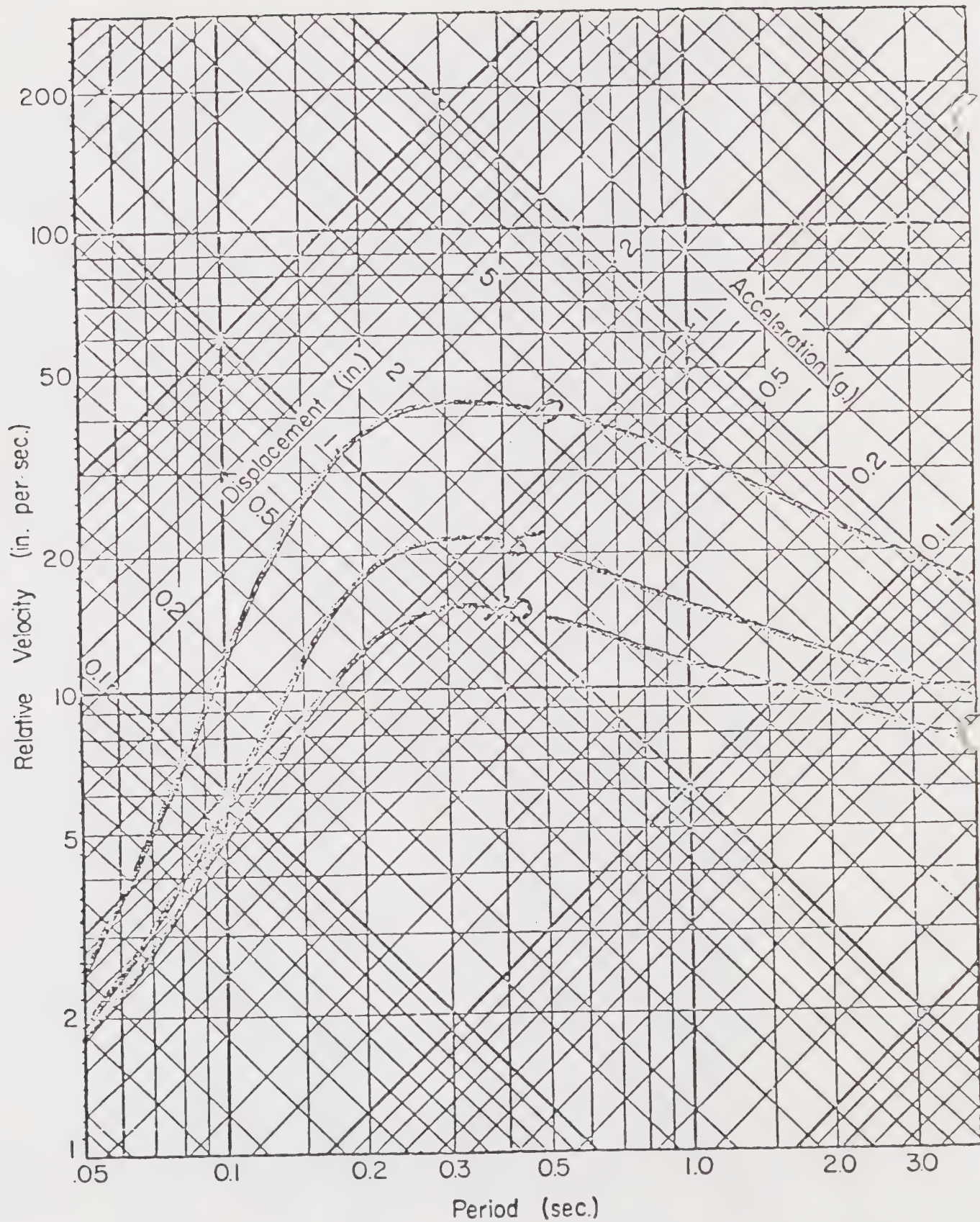


Figure C. Response spectrum from Zone IVA. Curves are for 0, 5, and 10% critical damping.

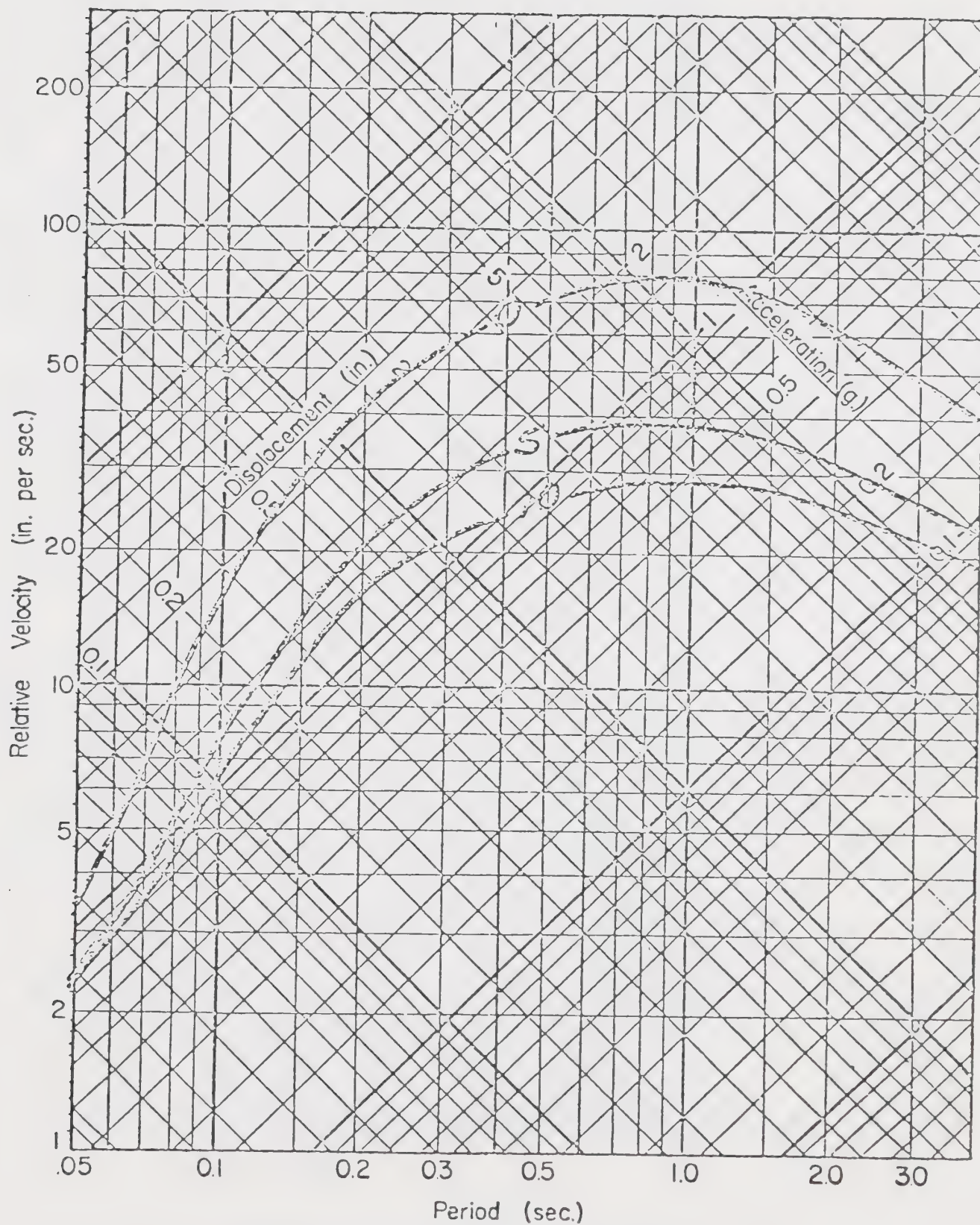


Figure D. Response spectrum from Zone IVB. Curves are for 0, 5, and 10% critical damping.

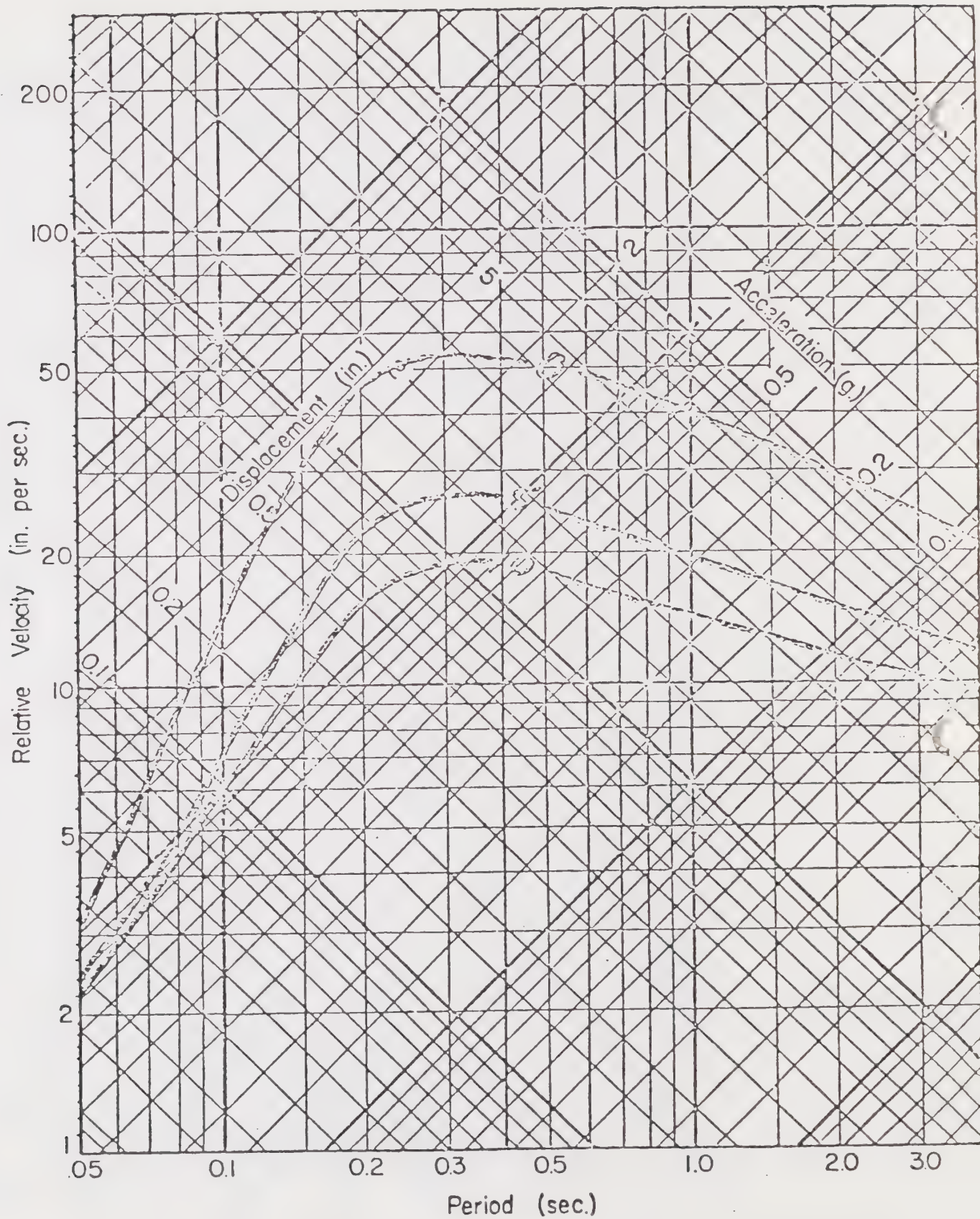


Figure E. Response spectrum from Zone VA. Curves are for 0, 5, and 10% critical damping.

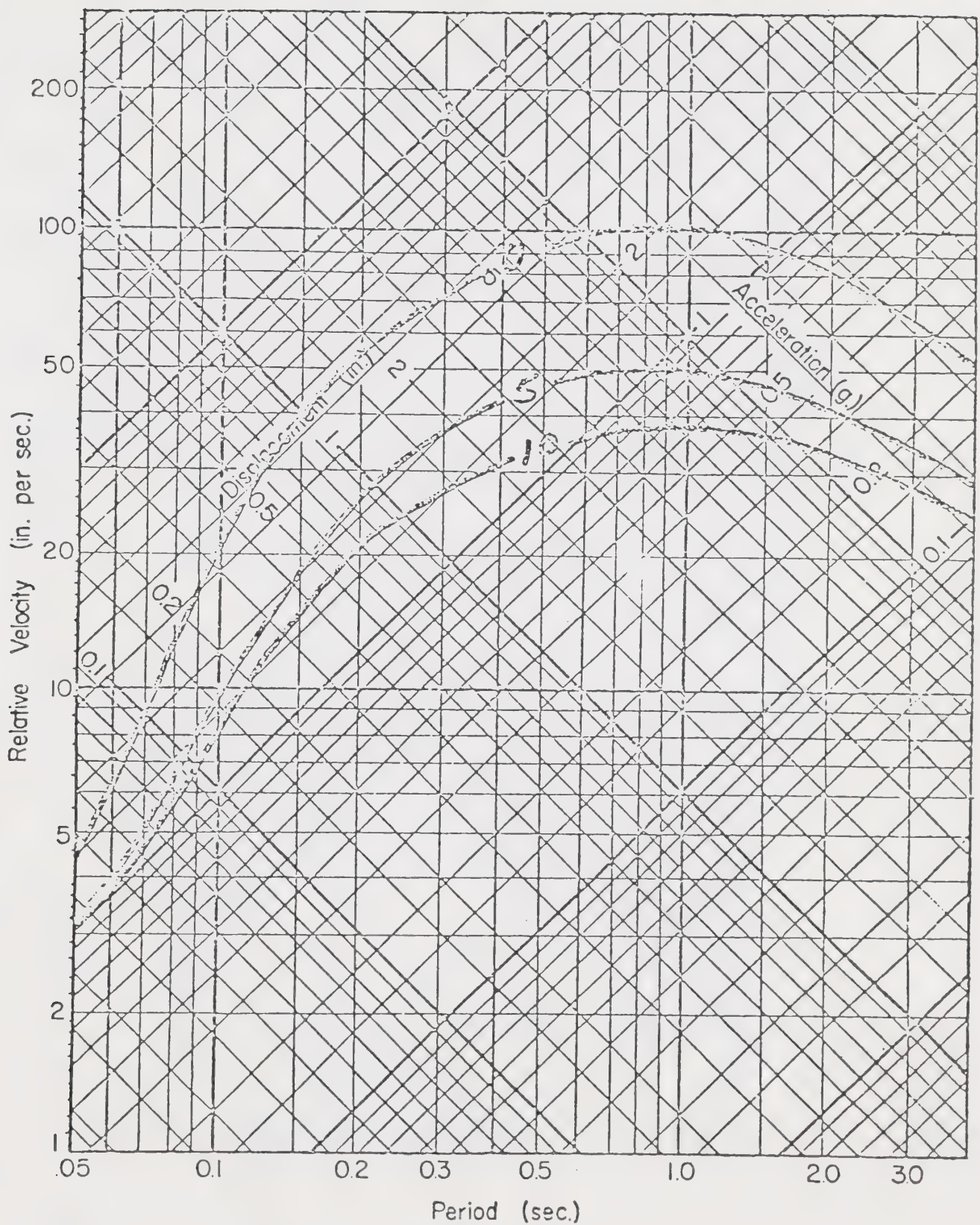


Figure F. Response spectrum from Zone VB. Curves are for 0, 5, and 10% critical damping.

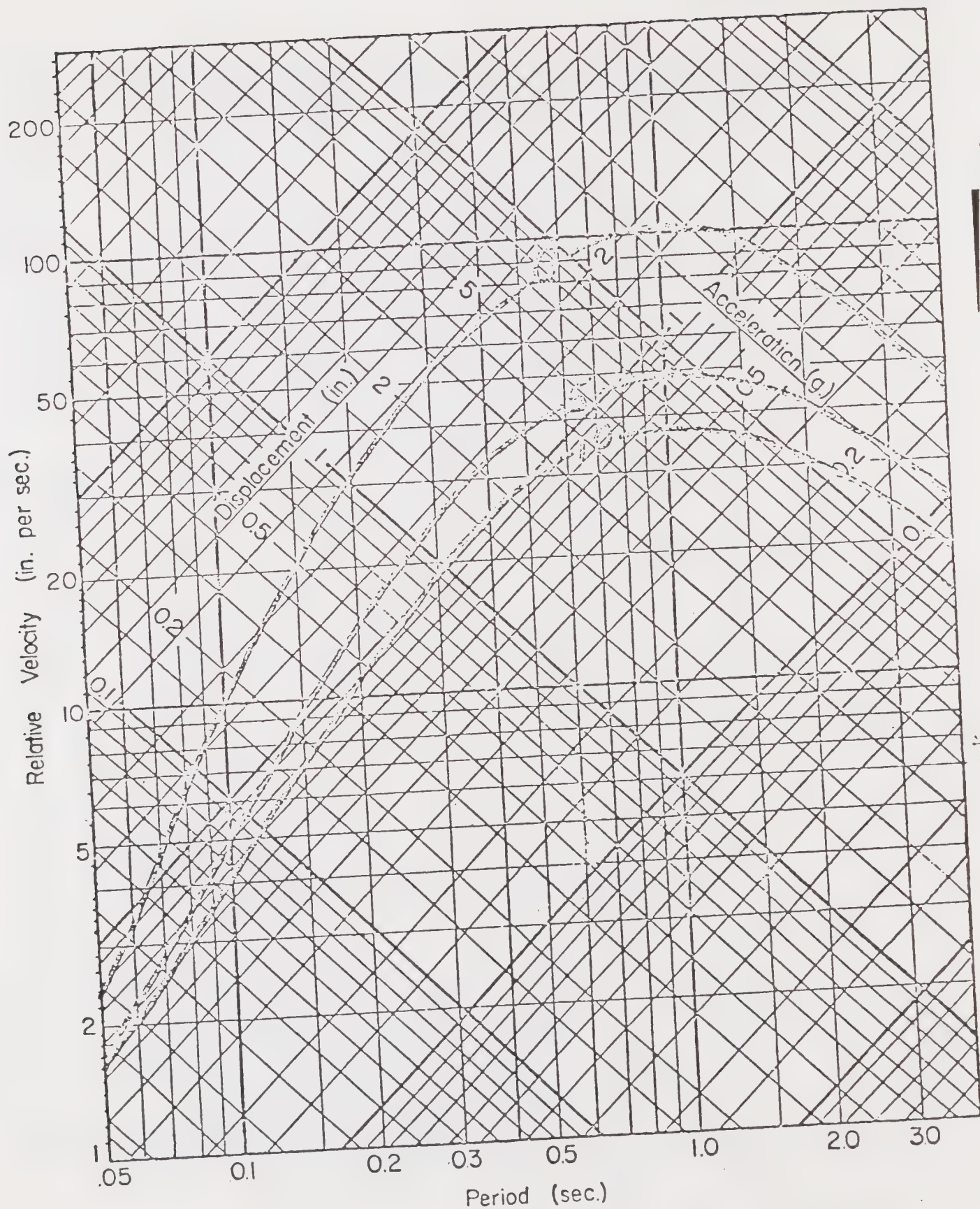


Figure G. Response spectrum from Zone VC. Curves are for 0, 5, and 10% critical damping.

MASTER FLOOD CONTROL AND DRAINAGE PLAN ELEMENT
CITY OF HEMET

ADOPTED - January 24, 1984
RESOLUTION NO. 2234

(This is a separate document and not included in this
publication)

SCENIC HIGHWAYS ELEMENT
CITY OF HEMET

ADOPTED - June 22, 1982

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INTRODUCTION

The California State Scenic Highways Program was established in 1963 by the State Legislature through Senate Bill No. 1467. This bill established the Scenic Highways Advisory Committee as the primary policy body for recommending program criteria, reviewing local applications for, and recommending approval of official scenic highway designations.

The Master Plan of Scenic Highways, which has been adopted by the State Legislature, identifies those highways in the State that are eligible for official designation. The basic procedure and required planning actions that a local government must take to achieve official designation and signing is outlined on page 6 of this element.

This element provides for the planning of official scenic highways as required by the State general plan guidelines. It also provides a mechanism to establish an informal local scenic routes program should the City desire to establish such a program.

Official scenic highways are so designated by the State Scenic Highways Advisory Committee after plans have been adopted and submitted by the local jurisdiction. Highways eligible for designation are listed in the California Streets and Highways Code, Section 263, Scenic Highways System. Highway 74, in its entirety, is listed as eligible for official scenic highway designation. Only the portion of Highway 74 known as the "Pines to Palms" Highway is officially adopted and posted with the distinctive poppy signs. This includes the area beginning approximately where Cranston Station is located, continuing approximately 47.7 miles east to the junction with State Highway 111 in Palm Desert.

County scenic highways are segments of county highways that the Director of the Department of Transportation has officially so designated at the request of the local government. Within Riverside County, there are presently three officially adopted and signed State scenic highways (as listed in Appendix A) and many other local and county routes as well. The Ramona Expressway is listed as an eligible County scenic highway in the Riverside County Scenic Highways Element, which was adopted in 1975 by the Riverside County Board of Supervisors. To achieve official designation of County scenic highways, the County would have to request the designation by the State Director of Transportation and provide the same level of protection to the scenic corridor as required for designation as a State scenic highway. Figure 1 depicts the eligible State scenic highways and the proposed County scenic routes within the Hemet area as contained in the County's adopted Scenic Highways Element.

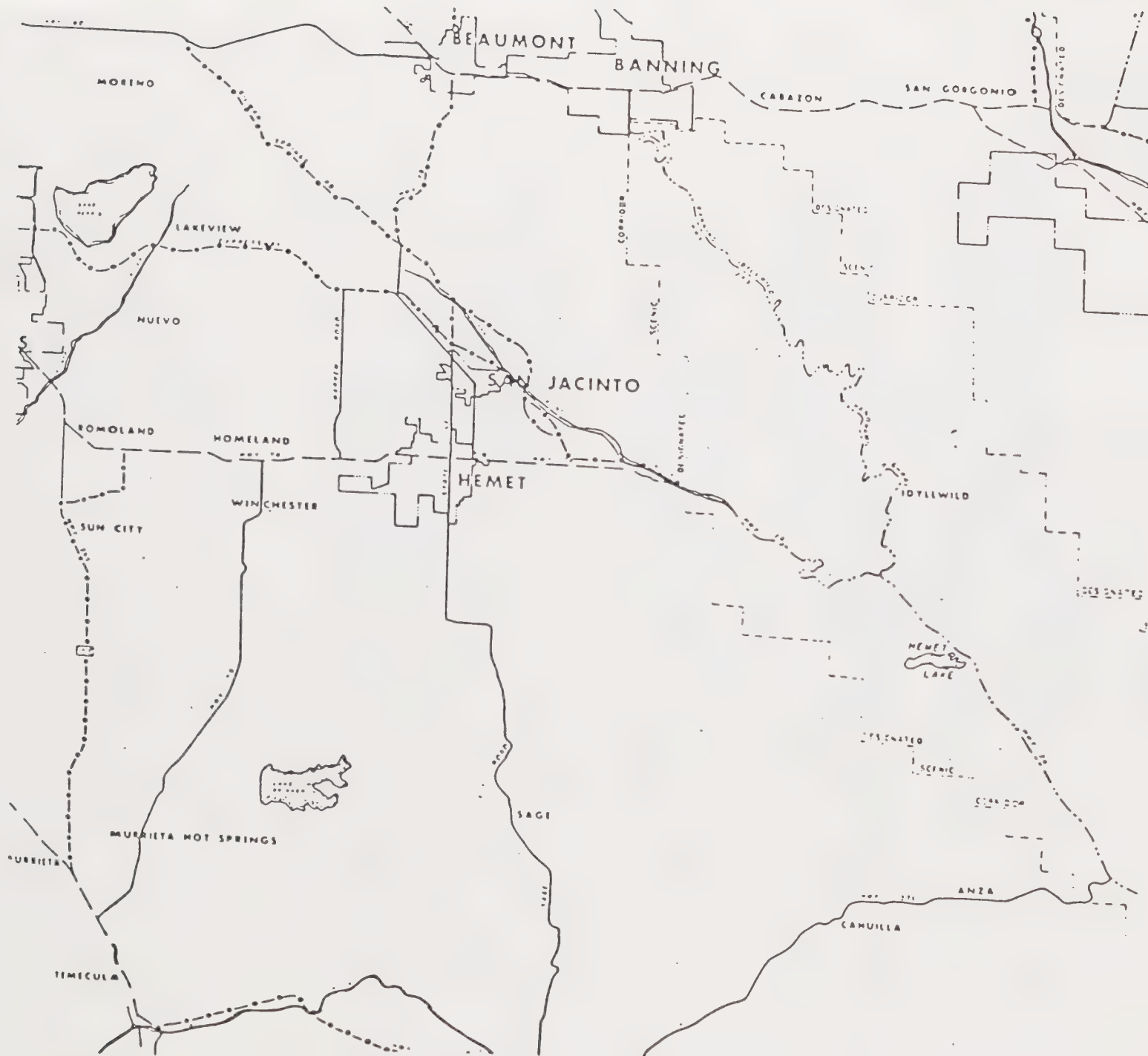


Figure 1. SCENIC HIGHWAYS ELEMENT
RIVERSIDE COUNTY GENERAL PLAN

LEGEND

- DESIGNATED STATE SCENIC HIGHWAYS
- ELIGIBLE STATE SCENIC HIGHWAYS



ELIGIBLE COUNTY SCENIC HIGHWAYS

Local scenic highways are segments of state highways or local roads or streets that the local government feels are of scenic significance, but which do not qualify for state designation. The preparation of a scenic highway element is the first step in developing programs to protect and enhance official State scenic highways, official County scenic highways, and local scenic highways. While scenic highways have traditionally run through natural open-space areas, they can include routes that pass through interesting or unique urban settings. The element can also include related facilities within the scenic corridors, such as bicycle and pedestrian trails, parks, roadside rest stops, and information centers.

Legislative Authority

Section 65302(h) of the California Government Code requires the adoption of a Scenic Highways Element as part of all City and County General Plans, as follows:

The Plan shall include a "Scenic Highways Element for the development, establishment, and protection of Scenic Highways pursuant to the provisions of Article 2.5 (commencing with Section 260) of Chapter 2 of Division 1 of the Streets and Highways Code."

The requirement for the Scenic Highways Element was added to the state statutes in 1971, with compliance by most jurisdictions required by September 20, 1974. At the beginning, the Scenic Highways Element was seen as a tool for local participation in implementing the State Scenic Highway Master Plan. Since many local jurisdictions do not have state highways eligible for official designations or may not want to pursue official designation for eligible routes, the Scenic Highways Element has become, in practice, primarily a vehicle for local designation and protection of significant local routes. If, after reviewing potential scenic routes, the jurisdiction determines that none qualify for scenic designation, then no further work is required.

Background Information

In 1975, the Hemet City Council adopted Resolution No. 1620 (which is included in the appendix) in support of the County of Riverside's Scenic Highway Element, with three exceptions. The City Council recommended that Sage Road, Bautista Canyon Road, and Highway 74 be deleted from the County's Plan. It was the opinion of that Council that the official designation of these three routes as scenic would increase traffic and result in circulation problems that would be detrimental to the health, safety, and welfare of the community. As an alternative to Highway 74, the City Council recommended the inclusion of the Ramona Expressway and its future extension as a 'priority scenic highway.' The Council further stated that they did not intend to include Highway 74 in the City's Scenic Highway Element

due to traffic problems and potential economic hardships that would be encountered in meeting the State Department of Transportation's criteria for official designation and signing, such as the undergrounding of utilities, street widening, and right-of-way acquisition.

As a result of the input received from the City as well as the County Open Space and Conservation Committee, both Sage Road and Bautista Canyon Road were deleted from the County's Scenic Element. Ramona Expressway and its future extension was included as an eligible County scenic highway. However, no further work has been performed by the County to achieve official designation and signing for Ramona Expressway.

Highway 74 (Florida Avenue) is listed in the State's Scenic Highway Master Plan as being eligible for official designation and signing. To achieve this designation and the poppy signs, a specific corridor study would have to be conducted by both CALTRANS and the City of Hemet. Additionally, standards and criteria would have to be adopted for the protection and enhancement of the scenic route. At this time, there is much uncertainty as to whether Highway 74 would be able to comply with the State's criteria for either rural or urban scenic route designation because of the types of land uses and lack of setbacks in the downtown portion of Highway 74. The State has identified two types of scenic highways, as follows:

"Rural Designated Scenic Highway - A route that traverses a defined corridor within which natural scenic resources and aesthetic values are protected and enhanced."

"Urban Designated Scenic Highway - A route that traverses a defined visual corridor which offers an unhindered view of attractive urban scenes."

The procedures for designation of eligible scenic routes established by the State will be presented later in this Element. Since Highway 74 in its entirety is shown as eligible in the State Streets and Highways Code, it would take legislative action for its deletion. However, it is up to the City to pursue the official designation and signing by instigating a corridor study by CALTRANS. In the event the City does not take this action, then the route will remain as it is at the present time.

Intent and Organization

The primary intent of the Scenic Highways Element for the City of Hemet is to establish an informal system of scenic routes with the ultimate objective being the protection and enhancement of prime scenic and historical areas along these designated routes. The program established by this Element contains the following general steps:

1. Statement of Goals - The Element contains a series of goals related to the overall end results desired of the Scenic Highways Program. They are intended to form the framework for public and private decision-making.
2. Policies and Action Programs - The policies contained in the Element are intended to be a more detailed interpretation of the goals. The action programs are suggested for the achievement of the goals and policies. The suggested programs will be initiated after the adoption and approval of this Element by the City Council.
3. Criteria for Local Scenic Route Selection - The Element contains criteria that should be considered during future programs when studying routes for their eligibility.
4. Recommended List of Local Scenic Routes - The Element contains a recommended list of local routes that are eligible for further study for inclusion in the Scenic Routes Program.

The Scenic Highways Element is not designed or intended to impose unnecessary or unjustifiable restrictions on public or private property. It merely establishes a program to study the eligible routes listed within this Element. Upon completion of the study, if areas have been identified as worthy of protection, public hearings would be held to include them in a Scenic Preservation Overlay Zone. The purpose of the overlay zone would be to supplement the underlying zone by providing additional regulations for setbacks and landscaping within designated areas. This proposed overlay zone would be drafted by the Planning Staff and undergo reviews by both the Planning Commission and City Council prior to any official action. Property owners and other concerned citizens would be invited to participate in any such action.

General Plan Relationships

There is a strong interrelationship between the Scenic Highways Element and other elements of the General Plan. This Element is perhaps most strongly related to the Open Space and Conservation Element because of the proposed program of scenic routes which will help initiate some of the goals and policies contained in that element. These goals and policies include references to scenic and historical preservation, visual relief, protection of community identity, and the utilization of proper design criteria to preserve the unique and special resources in the City. The Element is also closely related to the Circulation Element.

Procedures for the Designation of an Eligible Scenic Route

The Scenic Route - A Guide for the Official Designation of Eligible Scenic Highways prepared by the State Department of Transportation outlines the procedures involved in obtaining official State Scenic Highway designation and the poppy signs.

Official scenic highways may be designated by the State Director of Transportation after plans have been adopted and submitted by the local jurisdiction. The steps leading to adoption are:

1. Determination of eligibility - The proposed route must be designated as eligible on the State Master Plan and be delineated on an adopted local scenic highways element.
2. Initiation of process - Application for inclusion of a route may be made by either CALTRANS or the local jurisdiction.
3. Completion of corridor survey - Prepared by CALTRANS; this study includes route, scenic qualities, suggested corridor boundaries, potential information sites, and vista points.
4. Completion of a corridor plan - Prepared by the local jurisdiction; examples of this are the "Plan and Action Programs" for the three adopted scenic highway routes in Riverside County. e.g. "Pines to Palms" - Hwy. 74
5. State review - Applications are reviewed by an interdepartmental committee, the Scenic Highway Advisory Committee, and the State Director of Transportation. If the corridor plan is approved by these parties, the proposed route is designated as an official scenic highway.

SCENIC HIGHWAYS GOALS AND POLICIES

Scenic Highway Goals

The following goals represent the overall results desired of the Scenic Highways Program. They are intended to form the framework for decision-making by the City. These goals are interpreted in more detail by a number of policies. Finally, suggested action programs are included for implementation of this element. Some of these action programs are already in existence with the primary purpose intended in this element to reinforce these programs where they relate to this element. The suggested goals are as follows:

1. To consider informal local scenic routes that will increase the enjoyment of a variety of transportation modes, including bicyclists and pedestrians as well as automobiles.
2. To protect and enhance scenic resources within these specified areas.
3. To promote the utilization of landscaped setbacks in designated areas to increase the scenic resources in the City.

Policies and Action Programs

Policy 1. Procedures for designating a Scenic Preservation Overlay Zone should be completed for all scenic routes so designated by the City.

Action Program 1. A draft Scenic Preservation Overlay Zone should be prepared by the Planning Department for the purposes of implementing goals and policies contained in this element. e.g. landscaped setbacks along all scenic routes

Policy 2. The City should consider establishing landscaped entry points into the City.

Action Program 2. In addition to searching for sources of funding for this measure, developments occurring adjacent to these areas should contribute to their implementation.

Policy 3. Ordinances which require the amortization and removal of nonconforming signs shall be strictly enforced.

Action Program 3. The City of Hemet Sign Ordinance shall be strictly enforced.

Policy 4. The size, height, and type of on-premise signs should be the minimum necessary for the identification, and the design, materials, colors, and location of the

signs should blend with the environment, utilizing natural materials where possible and feasible.

Action Program 4. The City of Hemet Sign Ordinance should be strictly enforced.

Policy 5. Offsite outdoor advertising displays shall be controlled and nonconforming signs should be amortized and removed.

Action Program 5. The Hemet Sign Ordinance shall be strictly enforced regarding billboards and offsite advertising.

Policy 6. Trees and other roadside planting should be utilized to protect and enhance the view from the road; protection or enhancement of the scenic qualities should be the primary consideration in any proposed removal of mature trees or shrubs.

Action Program 6. A tree planting and landscaping program should be investigated for all scenic routes as part of the Scenic Preservation Overlay Zone.

Policy 7. The feasibility of incorporating riding, hiking, and bicycle trails and other compatible public recreation facilities within the scenic corridor should be investigated.

Action Program 7. Wherever possible, riding, hiking, and bicycle trails should be incorporated in scenic corridors as part of any new development proposals.

Policy 8. The City should consider the adoption of an informal scenic highways program as established by this element. Maximum citizen participation should be utilized with each step of the program.

Action Program 8.1. A Master List of Eligible Routes within the City and its Sphere of Influence Area should be prepared by the Planning Staff and included as part of this element for consideration by the Planning Commission and the City Council. Periodic review of this list for possible additions or modifications should be required.

Action Program 8.2. A corridor study for each of the routes contained in the Master List shall be prepared by the Planning Department. If this study shows the route is worthy of inclusion in the program, then the Scenic Preservation Overlay Zone should be applied.

Policy 9. The City shall coordinate its scenic highways program with State, County, and adjacent cities wherever possible.

- Action Program 9. The City shall solicit and utilize input from other governmental jurisdictions as well as input from property owners, civic groups, and other concerned citizens, in the preparation of corridor studies.
- Policy 10. The City shall seek financial assistance from Federal, State, and County sources whenever the expenditure of funds is necessary for implementation of this element.
- Action Program 10. All funding sources or grants available for scenic preservation will be investigated by the City Staff.

CRITERIA AND STANDARDS

A corridor study must be prepared for each route contained in the "Master List of Eligible Routes." When preparing each corridor study, the following criteria should be considered:

1. The scope of the corridor study should include, but not be limited to, the following information: angle and duration of vision; range of visibility; topography; vegetation; structures; distant visibility; scenery characteristics; natural and man-made features; landscape character; ecological areas; probable methods of protection; legal boundaries; precise alignment of the highway and boundaries of the corridor; potential locations of roadside rests, vista points, and areas for public or commercial information sites.
2. The City should solicit, at the earliest possible time, the help and advice of local citizen's committees, affected property owners, conservation groups, and other interested persons/organizations who might be interested in the results of the corridor study.
3. If the corridor study presents evidence that further controls are necessary, the City should prepare and adopt Scenic Preservation Overlay Zoning for each route. When preparing the implementing measures, the treatment and protection the route and corridor are to receive should be specified, such as landscaping controls, sign controls, setback requirements, placement of utilities and undergrounding of utility lines, erosion control, preservation and restoration of plant material, site planning and landscaping design, property maintenance, etc.
4. When official State designation is desired, the minimum requirements which must be met by the City include, but are not limited to: (1) regulation of land uses which may include density and/or the intensity of development; (2) detailed land and site planning; (3) control of outdoor advertising; (4) careful attention to and control of earthmoving and landscaping; and (5) the design and appearance of structures and equipment.

MASTER LIST OF ELIGIBLE ROUTES

The following list includes those existing local routes that the City Planning Staff and Consultant have reviewed and found to be worthy of further study within the context of this Element. The list may be expanded or modified as future conditions warrant. Additionally, State Highway 74, is listed as eligible on the State's Master Plan. However, the inclusion of Highway 74 in this list is for unofficial local scenic route designation - not for official State designation and signing.

Routes considered eligible for City of Hemet Scenic Route designation include the following:

1. Highway 74 (Florida Avenue) - from the westerly City limits east to the officially designated "Pines to Palms" Scenic Highway, with the exclusion of the area between State Street the easterly City limits.
2. Sage Road - from the beginning of Sage Road, including all of the Road within the City's Sphere of Influence area.
3. State Street - south of Stetson Avenue to its end
4. Sanderson Avenue - All of the portion of Sanderson Avenue that lies within the City limits and the Sphere of Influence.
5. Stetson Avenue - west of State Street, including all of the portions that lie within the City limits and the Sphere of Influence area.
6. Harrison Avenue - All of the portions that lie within the City limits and the Sphere area.
7. Warren Road - All of the portions that lie within the City limits and the Sphere area.
8. Ramona Expressway - From the intersection with Highway 395 east to its junction with State Highway 74, and then easterly to the existing officially designated state scenic highway at Cranston Ranger Station.
9. Gilman Springs Road - From the junction with State Highway 60 south, along the east bank of the San Jacinto River, past Soboba Hot Springs, and then across the river to join the Ramona Expressway.

GLOSSARY

- CALTRANS - California State Department of Transportation.
- INTERDEPARTMENTAL COMMITTEE - Comprised of representatives from the State Departments of Public Works, Parks and Recreation, and Water Resources, and the State Office of Planning.
- OFFICIALLY DESIGNATED STATE SCENIC HIGHWAY - A State or county route whose Scenic Corridor Plan and Action Program has been approved by CALTRANS, shown on official publications and posted with official poppy signs.
- OFF-SITE ADVERTISING - Advertising displays not located at the business site.
- ON-SITE ADVERTISING - Advertising displays located at the business site.
- RURAL DESIGNATED SCENIC HIGHWAY - A route that traverses a defined corridor within which natural scenic resources and aesthetic values are protected and enhanced.
- SCENIC CORRIDOR - The land area outside of the highway right-of-way which can be realistically subjected to protective land use controls.
- SCENIC HIGHWAY - A road, which in addition to its transportation function, provides opportunities for enjoyment of natural and manmade scenic resources where aesthetic values are protected and enhanced.
- SCENIC QUALITY - The total impression made by components of a natural or man-made landscape which provide an attractive and memorable visual experience to the viewer.
- SCENIC RESOURCES - Such irreplaceable and unique components in a landscape as topographical features, water bodies, vegetation, geological formations, rural life styles, and urban panoramas.
- SCENIC HIGHWAY ADVISORY COMMITTEE - Citizens Committee appointed by Governor to advise the Director of Public Works.
- STATE MASTER PLAN OF SCENIC HIGHWAYS - The official California Scenic Highway System Map which indicates eligible and existing officially designated state scenic highways.
- STATE SCENIC HIGHWAY PROGRAM - The program leading to the official designation of routes as scenic highways.
- URBAN DESIGNATED SCENIC HIGHWAY - A route that traverses a defined visual corridor which offers an unhindered view of attractive urban scenes.

APPENDIX

COUNTY OF RIVERSIDE
SCENIC HIGHWAY ROUTES

Designated State Scenic Routes

Since the inception of the Scenic Highways Program, Riverside County has had three sections of state highway routes designated as Official State Scenic Highways:

1. State Highway 74 - From the western boundary of the San Bernardino National Forest 47.7 miles east to the junction with State Highway 111 in Palm Desert. This route traverses the San Jacinto Mountain Range and affords views of Hemet, Garner Valley, and the Coachella Valley. Several vista points allow the traveler to pause and view the panoramas. This route was officially designated October 18, 1971.
2. State Highway 243 - From Mountain Center 27.7 miles north to the Banning city limits. This road leads the traveler through the rustic hamlets of Idyllwild and Pine Cove. Views of 10,805 foot San Jacinto Peak and the San Gorgonio Pass are seen. This route was officially designated March 21, 1972.
3. State Highway 62 - From its junction with Interstate 10, 8.8 miles north to the San Bernardino County Line. This desert highway affords views of Mt. San Jacinto, Mt. San Gorgonio, Palm Springs and the Little San Bernardino Mountains. This route was officially designated on September 14, 1972.

Eligible Scenic Routes

The Scenic Highways Element acknowledges that Highway 74 in its entirety is included as an eligible scenic route in the State's Master Plan.

State Highway 74 - From the junction with Grand Avenue 30 miles east to the western boundary of the San Bernardino National Forest. This route traverses the Perris Valley and connects to the Pines to Palms Highway.

County Scenic Highway Routes

The adopted County of Riverside Scenic Highways Element includes the following scenic route within Hemet's Sphere of Influence:

Ramona Expressway - From the junction with Highway 395 east to its junction with State Highway 74, and then easterly to the existing Officially Designated State Scenic Highway 74 at Cranston Ranger Station. This highway serves as a main entrance to Lake Perris and provides a link with the Pines to Palms Highway.

Gilman Springs Road - From the junction with State Highway 60 south, along the east bank of the San Jacinto River, past Soboba Hot Springs, and then across the river to join the Ramona Expressway.

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